

Railway Age

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SIXTY-FOURTH YEAR

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EDITORIAL

Railway Age

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A striking example of the economy of a high standard of equipment maintenance is to be found in the report on the

The Cost of Neglecting Auxiliaries

air consumption of locomotive auxiliary devices presented at the recent convention of the Air Brake Association. To one who has not made a special study of the situation, the air used by these devices would seem negligible, yet tests under actual working conditions demonstrated that the cost of the fuel required to supply air for their operation ranged from \$100 to \$300 per year per locomotive, depending upon the type of air compressor used. Furthermore, it was found that the maximum air consumption under certain conditions was so great that it taxed the capacity of the compressor and resulted in a shortage of air to supply the train line which might easily prove disastrous. If to the cost of fuel for air supply is added the increased wear and tear on the equipment and the probable loss due to delays and engine failures, no further evidence is needed to prove that the additional expenditures required to maintain auxiliaries in first-class condition will result in a substantial saving.

THE CURRENT AGITATION for the re-organization of industry has resulted in the formulation of various theories

The Barriers Should Be Removed

designed to improve the relations between employers and employees. Both parties are, beyond doubt, putting their best thought into the problem, but, in the main, the results have been discouraging. Generally speaking, the plans advanced by the employers depend for their efficacy on so-called welfare work, and those advanced by the employees, which usually aim chiefly at advances in wages and reduction of hours, are presented through their organizations. Both fall short of the mark for the same reason, the lack of personal contact between the interested parties. Many employers have for a long time realized that the best of plans, no matter how well thought out or how feasible they look on paper, will not work in practice owing to the lack of a sympathetic understanding. Consequently some of them are proceeding on another tack. Instead of following a predetermined plan they are making it their business to learn the viewpoint of the other fellow and, based on the knowledge gained, undertake improvements. Many of these improvements seem minor on their face, but often good results are obtained by them. To be concrete, a foreman is a comparatively small cog in a large organization. Investigation has proved, however, that he is in many cases a barrier rather than a connecting link between the employer and the men. The conception the men have of the company is dependent on the attitude of the foreman. To them he represents the company. If he is of the wrong type and is permitted to carry prejudice into his relations with the men he discourages ambition, discharges good men or keeps them in unsuitable positions and keeps the employer ignorant of the true conditions. Denying a foreman the right to discharge may seem to be of little consequence. But where it has been tried, on the railroads or in industrial plants, and the power given to someone higher up known to be fair to both sides, benefits

have sometimes resulted. A plan providing that no man on the permanent forces of the engineering department may be discharged or reduced in rank or pay without the approval of the chief engineer is in effect on a certain eastern road. The improvement which has resulted in this instance is sufficient to warrant further trials in this and other departments.

In the first four months of this year less than forty million dollars' worth of new work, chargeable to additions and bet-

Emigration Now Exceeds Immigration

terments, was authorized by the Railroad Administration. This is far below normal, leaving a corresponding accumulation to be authorized and carried out in the near future. When contemplating any program of construction the question of man power is important. For this reason it is interesting to note that in the four years ending December 31, approximately one million immigrants came into this country, although the number arriving each year steadily decreased during this period and in 1918 the net increase to this country's population through immigration was only about 16,000. It was announced recently, that in the six months since the armistice was signed, nearly 400,000 emigrants have left the country through the port of New York alone. Nearly 1,400 requests for passports to Europe are now being received daily at New York, most of the applicants being immigrants of short residence in this country, Italians predominating. From these figures it seems apparent that in the five months of this year the country has sustained a net loss of 250,000 in population or a decrease of 50,000 monthly, by far the greater proportion being of the class from which railroad and industrial labor is largely recruited. These figures suggest that the worries over the construction and maintenance programs will not be over when the money for carrying them out is made available.

Mr. Gray on Government Operation

ONE OF THE MOST INTERESTING and instructive addresses which have been delivered on our government's experience in operating the railways is that which was made by C. R. Gray, formerly director of operation of the Railroad Administration, before the St. Louis Railway Club on April 22. An abstract of Mr. Gray's address is published elsewhere in this issue.

Mr. Gray told of a number of vital problems, such as that of getting food to the Allies and coal to New England, with which the Railroad Administration was confronted and the way in which they were solved. It is easy for anybody who heard or who reads his address to understand why it was impossible for the railways to handle the essential war business of the country and at the same time be economically operated.

Mr. Gray's comments upon the labor situation were especially interesting. He showed clearly that the wage advances made as a result of the recommendations of the Railroad Wage Commission so completely disrupted all the old relationships between the wages of different classes of employees that immediate readjustments became absolutely neces-

sary. At the same time, he sees clearly the disabilities under which the government works in the handling of labor problems. One of these disabilities, as he pointed out, is that the government must make uniform scales of wages throughout the country regardless of differences of conditions; and the law of supply and demand, which, to a large extent, governs the wages paid by private concerns, cannot operate in the case of a business under government management. If in a certain district there happen to be conditions which force up the wages of men employed by private concerns in a particular line of work the government has only two alternatives. First, it may refrain from advancing wages to this special class of men in that particular territory; in that case it will not get enough men. Second, it may advance the wages to that special class of men in that particular territory. In that case it will be forced, regardless of differences in conditions in different parts of the country, to make a similar advance in wages to all workers of that particular class throughout the country. "Of the different things which I encountered which satisfied me that federal operation of all of the railroads would be an economic mistake," said Mr. Gray, "that was the most effective." He might have added that of all the things which have tended to increase railway expenses under government operation more than they would have been increased under private operation none has produced such potent effects as this real, or apparent, necessity for the Railroad Administration paying the same wages and prices throughout the country regardless of differences of conditions.

Mr. Gray paid high tribute to the loyalty with which railway officers have worked under government operation. He said that after Mr. McAdoo "had made trips over the country and had met these officers, with the greatest gratification he told me that in all his life he had never met a set of men who so measured up to what the emergency required as the railroad officers of this country." And of the men who entered the service of the government none rendered more tactful, loyal, arduous and effective service than Mr. Gray himself. It was fortunate for the railway officers of the country that when the demands made upon them under government operation were the greatest, and when the criticisms being heaped upon them were the most malignant, Director General McAdoo had associated with him as one of his principal lieutenants as fine and representative a type of the American railway operating officer as C. R. Gray.

Mr. Gray did not exaggerate, but spoke the simple truth, when he said, "that the men who stood behind this movement and supported it in every way, and worked themselves beyond everything that they had ever done before to hold up the highest traditions of the profession, were the railroad officers."

Michigan Central

IN 1918 the Michigan Central earned a profit over and above the rental which the government had to pay for it of over \$7,000,000. This profit, of course, accrues to the government. The rental which the government paid to the corporation was \$8,052,000. The amount which the property earned through operation was \$68,520,000, or \$15,641,000 more than the property earned in 1917. The Michigan Central consists of 1,862 miles of line, of which the main line, as will be seen on the map, runs from Buffalo along the north shore of Lake Erie to Detroit and from there across the southern end of the state of Michigan to Chicago. It formed one of the northern routes over which traffic was sent from the West to Atlantic seaboard points, avoiding the congestion of the Pittsburgh gateway. In 1918 the road handled 29,653,000 tons of revenue freight, an increase over

1917 of 2,412,000 tons. The average length of haul was a little longer in 1918—175 miles, as compared with 171 miles in 1917. Thus, the total ton mileage of revenue freight was 5,203,000,000, an increase over 1917 of 10 per cent. The number of passengers carried one mile was 588,696,000, an increase of 13,596,000, or about 2 per cent.

Total operating expenses amounted to \$51,070,000, an increase of \$12,781,000. The Michigan Central operating ratio was 74.53 in 1918, comparing with 72.41 in 1917.

The maintenance costs of the Michigan Central increased about in proportion to the increased maintenance costs on other roads. Thus, maintenance of way and structures cost \$7,705,000 in 1918, an increase of \$2,315,000; maintenance of equipment cost \$12,382,000, an increase of \$4,356,000. Sometimes it is well to pause a moment to get a full realization of what the increases in unit costs of repairs and renewals to a railroad property have amounted to in the last few years. We used to think of \$2,500 as a fair amount for cost of repairs per locomotive, \$900 per passenger car, \$75 per freight car, and \$1,500 for maintenance of a mile of road. The following table shows the unit maintenance costs on the Michigan Central for 1917 and 1918:

	1918	1917
Maintenance of way per mile.....	\$4,116	\$2,817
Repairs, exclusive of renewals and depreciation per locomotive	5,365	3,550
Repairs, exclusive of renewals and depreciation per passenger car	1,382	757
Repairs, exclusive of renewals and depreciation per freight car	132	77

With an increase of 10 per cent in freight business and with an increase in labor hour costs and unit of material costs, commensurate with that on other roads, the transportation expenses of the Michigan Central increased by only 27 per cent and amounted, in 1918, to \$28,214,000. If there were very many other roads in the country which had made such a showing as the Michigan Central did in 1918, the American railroad problem would be far less alarming than it now is.

In 1918 the average trainload of revenue freight amounted to 698 tons, an increase over the previous year of 43 tons. Car loading was much better in 1918 than in 1917, the average tonnage per loaded car being 22.39, an increase of two tons over 1917. The Michigan Central carried a much larger proportion of bituminous coal in 1918 than in 1917. Of the total 29,653,000 tons of all revenue freight carried in 1918, 7,848,000 tons were bituminous coal, whereas in 1917, of the total 27,240,000 tons carried, 6,340,000 tons were bituminous coal. It is rather interesting to note that the tonnage of dressed meats, amounting in 1917 to only 184,000 tons, amounted in 1918 to 421,000 tons, and the tonnage of other packing house products, amounting in 1917 to only 189,000 tons, amounted in 1918 to 502,000 tons.

Like the other principal New York Central lines, the Michigan Central will have to do some permanent financing when the roads are turned back to their owners, but there is this much to be said, if any American railroad is to have its credit fully restored, on a basis of its earning power under present labor and material costs, the Michigan Central ought to stand high in the ranks of the roads bidding for money. The corporation, at the end of 1918, had on hand \$1,398,000 cash and the government owed it \$5,056,000 for rental due, \$2,713,000 for cash taken over on January 1, 1918, \$5,488,000 for agents' and conductors' balances of that date; and \$8,070,000 for materials and supplies. The agents' and conductors' balances can, of course, be disregarded since that item will presumably balance itself when the roads are returned. The Michigan Central had outstanding at the end of 1918 \$22,885,000 loans and bills payable. It owed the government \$4,362,000 for additions and betterments, \$2,943,000 for "corporate transactions," and \$10,365,000 for liabilities as of December 31, 1917, paid by the government.

Can the Michigan Central keep up under present conditions the profitable operation as shown in 1918? In the first three months of 1919 the property earned \$16,764,000 gross and operated on a ratio of 80.52 and had an operating income of \$2,785,000. This operating income is more than the operating income for the first three months of 1918 by \$1,089,000.

The following figures show the results of operation under the government. This is not the corporate income account:

	1918	1917
Mileage operated	1,862	1,862
Freight revenue	\$45,949,560	\$33,898,247
Passenger revenue	15,901,585	12,859,299
Total operating revenues	68,520,087	52,879,434
Maintenance of way and structures	7,705,080	5,389,671
Maintenance of equipment	12,382,137	8,206,084
Traffic expenses	738,990	865,239
Transportation expenses	28,214,019	22,211,260
General expenses	1,149,799	973,012
Total operating expenses	51,070,072	38,289,136
Taxes	1,899,790	1,762,795
Operating income	15,542,761	12,814,097

CORPORATE INCOME ACCOUNT		1918
Rental		\$8,052,127
Gross income		8,955,107
Net income		2,569,563
Dividends		749,456
Surplus		1,820,107

Cleveland, Cincinnati, Chicago & St. Louis

HAD THE Cleveland, Cincinnati, Chicago & St. Louis been an independent company without strong banking support, it would quite probably have had to go through a receivership in 1913 or '14. At the end of 1913 the company had outstanding \$91,943,000 of funded debt and \$57,067,000 of stock, of which \$10,000,000 was preferred. It had loans and bills payable of \$7,454,000, and total current liabilities, including these loans, of \$14,416,000. There was but \$3,646,000 cash on hand, and, including this cash, but \$11,093,000 current assets. In 1913 the road had failed to earn its fixed charges by \$2,698,000, which debit to profit and loss wiped out the small previously existing surplus and left a debit to be carried to the balance sheet of \$1,390,000. The funded debt was at the rate of about \$46,000 a mile, and gross earnings amounted to less than \$17,000 per mile.

The road had been seriously damaged by unprecedented floods, with the prospect that not only would considerable expenditures on capital account be needed in the immediate future, but that there would be attendant heavy charges for maintenance. Making a full allowance for a loss of \$1,200,000 in revenues on account of the flood (which now seems unduly high), and \$400,000 added to operating expenses, the road had an operating ratio of 83.2 per cent. It would have been exceedingly difficult to have gone to a disinterested banking house, either on the basis of these figures or of a physical inspection of the property, and to have raised the necessary funds for continued solvent operation.

The Big Four, being a subsidiary of the New York Central, was enabled to escape financial disaster and was thus given a chance to pull itself out of its difficulties by increased earnings, accompanied by economies in operation. In 1914, \$1,500,000 was spent for additions and betterments to roadway and \$4,949,000 was expended for new equipment. In 1915, \$1,045,000 was spent on additions to roadway and \$3,689,000 for equipment; but against this equipment charge there was a credit for equipment retired of \$1,390,000, leaving a net increase in investment in equipment of \$2,299,000. In 1916, \$1,605,000 was spent for additions and betterments to road, and \$1,408,000 for equipment, less \$1,809,000, value of equipment retired, leaving a net decrease in investment in equipment of \$401,000. In 1917, \$2,222,000 was spent for additions and betterments to road, and \$5,616,000 for equipment, less \$1,525,000 value

of equipment retired, leaving a net increase in investment in equipment of \$4,092,000. During the years 1913 to the end of 1917, the outstanding funded debt increased from \$91,943,000 to \$105,248,000, but in the meantime the mileage had increased from 2,014 miles to 2,387 miles, so that funded debt was at the rate of only \$44,000 per mile, as against \$46,000 per mile in 1913. The increase in funded debt of approximately \$13,000,000 was the result of a decrease in outstanding debentures and an increase in outstanding equipment trust certificates, miscellaneous obligations and the establishment of a debt of \$6,017,000 to affiliated companies.

During this time loans and bills payable were reduced from \$7,454,000 to \$3,763,000, and cash on hand remained around \$3,000,000.

The total of \$6,372,000 for additions and betterments to road and of \$10,939,000 for equipment was provided for, partly through the increase in debt to affiliated companies, and partly through surplus earnings put back into the property. In 1914 there was still a deficit after the payment of interest charges, but in 1915 there was net income of \$3,405,000 and in 1916 of \$8,332,000, from which, however, \$750,000 was charged off for equipment depreciation not taken up through adequate charges to maintenance in previous years, and there was also \$375,000 paid out in dividends on the preferred stock. In 1917 there was \$5,258,000 net income available for dividends, and the full 5 per cent, calling for approximately \$500,000, was paid on the preferred stock. This left, after sinking fund charges, \$4,657,000 to be transferred to the credit of profit and loss. The 1916 and '17 surplus wiped out the previous debit to profit and loss and left a credit balance, December 31, 1917, of \$9,661,000.

Under government operation the Big Four continued its remarkably fine showing. In 1918 the property earned \$71,404,000, an increase over 1917 of \$18,753,000. It is an astounding fact that the operating ratio was within a fraction of one per cent as low in 1918 as in 1917 (72.68 in 1918 and 72.29 in 1917). The ratio of transportation expenses (the out-of-pocket cost of moving the business) was actually less—39.52 in 1918 and 40.76 in 1917. The rental which the government is to pay is \$9,939,000. The net income which the government received in 1917 was \$14,689,000; this is after paying expenses and rentals.

In 1918 the Big Four handled 43,056,000 tons of freight, an increase of 3,385,000 tons over 1917, and the average haul per ton was 178.8 miles, as against 178.0 miles in 1917. The ton mileage handled, therefore, amounted to 7,010,000,000 in 1918, an increase of 638,000,000 ton miles. The average receipts per ton per mile were 7.12 mills in 1918, as against 5.66 mills in 1917.

The average revenue trainload was 779 tons; this compares with 691 tons in 1917 and 457 in 1913, the year before the flood. The average load of revenue freight per loaded car mile was 27.4 in 1918, as against 25.0 tons in 1917.

Of the many factors which have gone to make up this history of the imminently successful rehabilitation of a road under conditions which were dragging many other railroads on the way to bankruptcy, notwithstanding the fact that they appeared in 1914 to be in a far better condition than the Big Four, one or two stand out beyond all the others.

One of these is the wonderful spirit of co-operation and teamwork which was infused into the organization. In all lines of human endeavor, it is possible for a born leader of men to use a desperate situation as a stimulus to efforts that would be unthinkable under ordinary conditions. The Big Four was in a desperate situation, but the organization came back with a united effort that is worth admiration. The other feature about this remarkable story of rehabilitation is the courage shown in providing facilities in addition to

repairing flood damages. It takes no ordinary brand of courage to order new locomotives and rolling stock when the road faces possible receivership and when the market for equipment trust certificates is extraordinarily bad, but this is what the management of the Big Four did, and the results in 1918 are a monument of justification.

The following figures show the results of operation under the government. This is not the corporate income account:

	1918	1917
Mileage operated	2,396	2,396
Freight revenue	\$49,934,631	\$36,077,390
Passenger revenue	15,359,128	12,009,346
Total operating revenues	71,403,970	52,650,920
Maintenance of way and structures	7,298,040	4,378,438
Maintenance of equipment	13,894,337	9,808,408
Traffic expenses	882,576	1,042,726
Transportation expenses	28,229,455	21,459,558
General expenses	1,201,871	1,054,131
Total operating expenses	51,895,289	38,059,421
Taxes	3,538,918	2,144,868
Operating income	15,972,011	12,436,999
Net operating income	14,688,938	10,536,475

CORPORATE INCOME ACCOUNT

	1918
Rental	\$9,938,597
Gross income	10,772,278
Net income	4,736,706
Dividends and appropriations	627,350
Surplus	4,109,356

New York Central

THE RESULTS of operation of a railroad under government control in the calendar year 1918 are not necessarily a criterion of the net earning power of the property under private operation and with competitive conditions. On the other hand, in the east the year's operations were, generally speaking, an acid test of the ability of a property and the organization to handle a greatly increased business satisfactorily. Where a road had superimposed on it a management not intimately familiar with its problems or not necessarily sympathetic with its particular line of development, or where it was called upon to handle a character of traffic which it was not naturally best fitted to handle, 1918 operating results were hardly a fair criterion of what may be expected of the property in the future. On the other hand, where a property showed up remarkably well under the conditions in 1918, it is fairly safe to assume that that property had been put in remarkably good shape prior to 1918 and that its chances of profitable operation in the immediate future are more than fairly good. This latter is the case with the New York Central.

Up until ten years or so ago the eastern end of the New York Central (what was then the New York Central & Hudson River) was looked upon as a high class passenger road with a large proportion of fast and bulky, but light freight business, more comparable in its operating problems to some of the English roads than any of the other trunk line railroads. When the Lake Shore & Michigan Southern and the New York Central & Hudson River were merged, the Lake Shore's heavier train load and larger proportion of coal and ore pulled up the average train load for the whole system, but even in 1914 the revenue freight train load averaged for the system only 642 tons. In the calendar year 1918, with operating conditions in the first three months of the year that were unprecedentedly unfavorable, the New York Central had an average revenue train load of 891 tons and the train load including company freight averaged 970 tons. The gain over 1917 in revenue train load was 47 tons. The average tonnage of revenue freight per loaded car was 26.36 tons in 1918 as against 24.15 tons in 1917. It is notable that while the average number of loaded cars per train mile was 33.80 in 1918 as against 34.94 in 1917, the average number of empty cars per train was 18.05 as against 16.59, so

that the gross tonnage hauled behind the drawbar increased much more than is indicated by the increase of 47 tons in revenue train load.

These figures for operation are cited before discussing the financial results of the year's operation because they are so essential to an understanding of the financial showing made.

When the roads were taken over by the government, A. H. Smith, president of the New York Central, was appointed regional director of the Eastern region, but remained also president of the corporation. In June Railroad Administration officers severed their connection with the corporations, and for the last seven months of the year, therefore, the property was operated under P. E. Crowley, federal manager in the Eastern region, acting under A. H. Smith as regional director.

To repeat once more, the financial results of operation of the railroad properties under federal control do not affect the amount available for interest and dividends on the corporation's securities. The New York Central's rental due from the government was fixed at \$55,803,000. This left, after the payment of interest, corporate expenses, etc., and war taxes \$24,465,000. From this, on the New York Central's books, is subtracted \$6,548,000 for expenses applicable to the period prior to January 1, 1918, and settled for the account of the corporation by the United States Railroad Administration. This left \$17,917,000 net corporate income. The five per cent dividends call for \$12,480,000. So much for the corporation income account.

The property—5,682 miles—earned in 1918 from its operation as a railroad \$269,271,000, or \$53,003,000 more than in 1917. After paying operating expenses and taxes there was \$47,342,000 railway operating income in 1918, as against \$52,068,000 railway operating income in 1917. Against the expenses of 1918, however, had been charged the \$6,195,000 lap-over expenses accrued prior to January 1, 1918. Making the necessary adjustments and figuring in rent and hire of equipment there was a net income of \$52,230,000, comparing with \$55,803,000 rental due to the corporation from the government. Had the property been operated on its own account it would have had after paying interest charges, approximately \$14,300,000 available for dividends, with dividend requirements of \$12,480,000. When we compare this with the financial showing of some of the other eastern roads it looks exceptionally good.

Unfortunately the balance sheet statement of the New York Central (the corporation) is not so encouraging, but this is primarily due to the fact that the New York Central has a heavy proportion of funded debt to stock and has not in recent years been able to do the long term financing which it wanted to do. The corporation has approximately \$250,000,000 of stock and \$688,000,000 of long term debt. At the end of 1918 the company had \$41,963,000 loans and bills payable and owed the government \$16,651,000 for additions and betterments and \$21,512,000 for liabilities of December 31, 1917, paid by the government. There was on hand at the end of 1918, \$8,993,000 cash and the government owed the company \$27,672,000 on account of rental, \$13,407,000 for cash taken over January 1, 1918, \$9,617,000 agents' and conductors' balances, \$34,240,000 materials and supplies and \$6,919,000 assets as of December 31, 1917, collected by the government. The totals are \$73,342,000 current liabilities and \$73,927,000 deferred liabilities, with \$48,917,000 current assets and \$74,477,000 deferred assets.

Were the railroads to be handed back to their owners tomorrow, from an operating point of view the New York Central would be in a strong position comparatively. The organization is intact, the physical condition of the property is good, and owing to its ability to handle increased traffic during the first trying months of 1918, it has gained rather than lost, from a traffic point of view, through being operated by the government. In regard to the condition of the property a

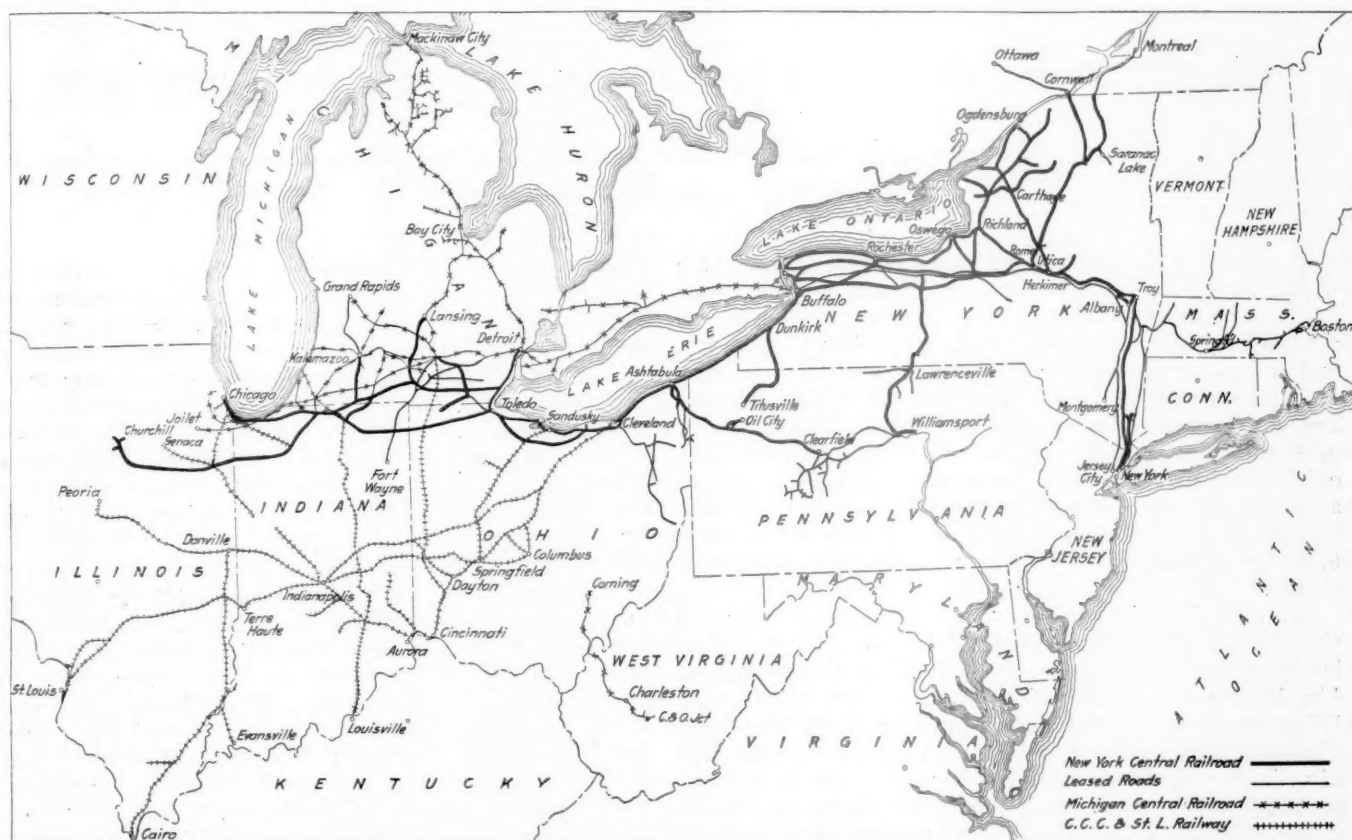
word should be said about maintenance expenses in 1918. Total maintenance of way expenses amounted to \$31,868,000, an increase of \$11,163,000 over 1917. Maintenance of equipment expenses amounted to \$57,313,000, an increase over 1917 of \$18,866,000. These increases in maintenance of way expenses reflect no more than the increased unit costs of labor and material. As a matter of fact, however, the physical condition of the New York Central would indicate that the federal officers have been able to pretty well keep up the old standard of maintenance and especially is this so in regard to maintenance of way.

In 1918 a net total of \$40,735,000 was spent for additions and betterments. Of this amount \$11,433,000 was expenditures made by the federal manager, \$13,002,000 was the cost of equipment assigned to the New York Central by the United States Railroad Administration, \$8,511,000 was expenditures by the corporation for additional equipment and \$4,783,000 was expenditures by the federal manager on leased property.

strated probably to the satisfaction of most of the federal officers in charge the wisdom of prompt replacement of obsolete equipment and the absolute necessity, if American railroads are to meet the ever progressing needs of the country, of the continued purchase of new equipment before the need for such equipment becomes desperately pressing. The financial results on the New York Central in 1918, although not affecting the pocketbook in that year, at least of security holders, probably demonstrated very clearly to most of the corporation's directors the wisdom of the policy in regard to purchasing equipment.

The following table shows the principal figures for operation of the property of the New York Central under federal operation. This is not the corporation income account:

	1918	1917
Mileage operated	5,682	5,685
Freight revenue	\$175,869,945	\$135,979,337
Passenger revenue	60,370,139	49,987,343
Total operating revenues.....	269,270,957	216,267,517



The New York Central, the Cleveland, Cincinnati, Chicago & St. Louis and the Michigan Central

The policy pursued by the New York Central in regard to purchases of equipment in recent years is of especial interest in the light of operations in 1918. On January 1, 1915, there were 1,774 locomotives on hand in freight service, 795 in passenger service and 680 in switching service. During 1915 forty-six freight locomotives were added and 142 freight locomotives, 34 passenger locomotives and 15 switching locomotives retired. In 1916 there were added 123 freight locomotives, 11 passenger locomotives and 26 switching locomotives; there were retired 140 freight, 44 passenger and 33 switching locomotives. In 1917 there were added 64 freight, eight passenger, 113 switching and 10 electric locomotives, and there were retired 81 freight, 19 passenger and 17 switching locomotives. In 1918 there were added 231 freight, 43 passenger and 86 switching locomotives, while 26 freight, 13 passenger and 3 switching were retired. This is a total of 464 freight locomotives added and 399 retired.

The operation of the New York Central in 1918 demon-

Maintenance of way and structures..	31,867,769	20,704,306
Maintenance of equipment.....	57,312,738	38,446,594
Traffic expenses	2,572,460	2,929,824
Transportation expenses	109,405,171	83,627,440
General expenses	6,239,315	4,923,016
Total operating expenses.....	210,637,849	153,597,905
Taxes	11,273,156	10,594,036
Railway operating income.....	47,342,357	52,056,181
Net income	46,035,896*	51,090,931

*Expenses subtracted to arrive at this figure include \$6,194,712 accrued prior to January 1, 1918, which the administration has paid on account of the corporation.

CORPORATE INCOME ACCOUNT

	1918
Rental from the government.....	\$55,802,631
Other income	13,471,252
Gross income	69,270,921
Net income	24,465,345
Dividends	12,479,610
Surplus	11,985,735*

*The company on its books subtracts from this amount \$6,548,000 expenses accrued prior to January 1, 1918, paid on the corporation's account by the administration.



A. H. Smith



A. T. Hardin



J. H. Hustis



H. A. Worcester

Eastern Region Under A. H. Smith as Director

The Complicated Problem Caused by Congestion in
1917-18 Completely Worked Out

ALFRED H. SMITH, director of the Eastern region of the Railroad Administration, has resigned to return to the presidency of the New York Central. Mr. Smith was the first regional director appointed by William G. McAdoo, and at the outset had under his jurisdiction the territory now included not only in the Eastern region but in the Allegheny and Pocahontas regions as well. He faced a situation of great difficulty requiring firmness and the ability to make quick decisions. Mr. Smith possesses these qualifications to a marked degree. Throughout his handling of the Eastern territory, he showed entire fearlessness and took the initiative to an extent that has seldom been equalled in government service.

A. T. Hardin, who has been assistant regional director and also director of the Central District of the Eastern region, has been appointed regional director of the Eastern region. Mr. Hardin has worked with Mr. Smith for many years. When Mr. Smith became general manager of the New York Central & Hudson River in 1903, Mr. Hardin was engineer of maintenance of way, and in 1905 was appointed assistant to the general manager. A year later, Mr. Smith was elected vice-president and Mr. Hardin was made assistant general manager and his authority was extended over the other New York Central lines at the time of the extension of Mr. Smith's authority; when Mr. Smith became president, he was elected vice-president in charge of operation, maintenance and engineering.

The eastern railroad situation has now been straightened out; there is no congestion; the roads are seeking traffic; the Pittsburgh gateway is opened; New England is supplied with coal; and the old familiar problems of holding down expenses and securing additional business are again to the fore. When, however, A. H. Smith was appointed regional director of the Eastern region in January, 1918, the Pittsburgh gateway was completely blocked; there were lines of loaded cars extending back from the Atlantic seaboard for many miles; the thermometer varied between 5 deg. below zero to 30 deg. below zero; one storm after another buried yards and main lines deep under thick frozen snow; New York harbor froze up; a coal famine threatened everywhere in the east; and government priority orders had so interfered with each other

that only with the utmost difficulty and the exercise of extraordinarily sound judgment could any superintendent tell what traffic he should try to move first. Passenger trains were stalled; trainmen and yard and switchmen fought the cold and wind, rising sometimes to 70 miles an hour, but a day's work under such conditions as these accomplished less, often, than would two hours' work under normal conditions.

The Eastern ports—Norfolk, Baltimore, Philadelphia, New York and Boston—were the crucial points in the situation both as regards supplies and munitions for the Allies and for getting our own army overseas.

The best that the new regional director could hope to do was to quickly form a loyal organization of the men actually on the ground and so direct and co-ordinate this organization as to bring order out of chaos. The president of each railroad in the Eastern region was directly responsible for the operation of his road to the regional director, but an advisory organization was formed which consisted of six presidents' committees as follows: New England district, James H. Hustis, receiver of the Boston & Maine, chairman; New York, Niagara and Frontier district, W. H. Truesdale, president of the Delaware, Lackawanna & Western, chairman; Central Traffic district, J. J. Turner, vice-president of the Pennsylvania lines west, chairman; Philadelphia, Baltimore and Pittsburgh district, Samuel Rea, president of the Pennsylvania Railroad, chairman; Hampton Roads district, N. D. Maher, president of the Norfolk & Western, chairman; and the Michigan and International Boundary district, F. H. Alfred, president of the Pere Marquette, chairman.

This organization endured until June, 1918, when federal and general managers were appointed in place of the presidents of the roads. When this change took place, Mr. Smith recommended the appointment of the president or the operating vice-president, in charge of the property in each case, as federal or general manager.

Thus, since A. T. Hardin, vice-president of the New York Central, had been taken into the organization of the region, P. E. Crowley, vice-president of the New York Central, was made federal manager of the New York Central; E. J. Pearson, president of the New Haven, was made federal manager of that property; A. J. Stone, vice-president in

charge of operation of the Erie, was made federal manager of that property; H. M. Biscoe, vice-president of the Boston & Albany, was made federal manager of that property; E. M. Costin, general superintendent of the Cleveland, Cincinnati, Chicago & St. Louis, was made federal manager of that property; and this policy was pursued even to the appointment of separate general managers for the Central of Vermont and for the Canadian Pacific lines extending into New England.

The line of action taken in regard to personnel had probably a very important effect on operating conditions. The size of the region made it necessary to subdivide it into districts and each district director, himself familiar from long experience with conditions in his district, was surrounded with federal and general managers, operating properties with which they were thoroughly familiar and in sympathy with. It might have been perfectly logical and feasible to have combined a number of the roads in some of the districts, certainly in the New England district, under one general manager or federal manager, but it was felt that it would be a grievous mistake to make a change under the tremendous stress of last year's railroad conditions which, however logical in itself, would, for the time being, deprive any property of the man most familiar and most sympathetic with its problems.

Prior to the assumption of government control, there was competition for through business between the New York Central, the Erie, the Lackawanna, Lehigh Valley, Pennsylvania and Baltimore & Ohio. With the placing of the first four within the Central district of the Eastern region, not only was competition eliminated between these roads but a choice of routes was made available by which it became possible to segregate certain classes of shipments to one or other of the roads and to so arrange freight schedules as to permit of a quick shifting of traffic from one route to the other to meet temporarily abnormal conditions. Furthermore, the fact that all of the roads were under government control eliminated competition with the two important roads in what later became the Allegheny region—the Baltimore & Ohio and the Pennsylvania.

The New York Central, in so far as its trackage, exclusive of terminals, is concerned, probably had, in 1917, a larger margin of safety in so far as actual road movement of freight was concerned than had any of its important competitors. The other three roads had a considerable margin of capacity in road movement of freight, and the joint utilization of all of these roads is thought to have very considerably increased the total of this margin of capacity.

The New York Central had been foresighted and courageous in buying both cars and locomotives in 1916 and 1917. At the time, the cost of this equipment had seemed very high and naturally purchases were entered upon only after the most careful consideration. The bitter weather of December, January and February crippled the locomotives, especially of the Pennsylvania, to a dangerous extent. For a while, the problem was one of diverting both east and westbound business from the Pittsburgh gateway and especially from the railroads between Pittsburgh and Philadelphia and Baltimore.

Peculiar Difficulties of the Situation

The situation was not one for punctilious niceties or sensitive fear of criticism. Mr. Smith was a New York Central man, and the competition between the New York Central, the Pennsylvania and other eastern trunk lines had, in times past, been keen. While it was true that the government was guaranteeing a rental to each road on a basis of business handled under free competition, there was, even under the regional system adopted, the possibility that some roads would look with suspicion on anything that was done to divert traffic from their lines. On the other hand, the operating

officers of the lines from which it was necessary to divert traffic, themselves, apparently, were fully aware of the needs of the situation. Up until May 31, when the Allegheny and Pocahontas regions were formed, it is probable that everyone in authority concerned with the operation of the roads in the Eastern region felt the urgent necessity of turning traffic away from the Pittsburgh district. The Pennsylvania Railroad, itself, had cars above normal on its lines amounting to 19,000 in January, to 27,000 in the early part of February, and to 10,000 in the latter part of February. Car movement, because of the severe weather, was far below normal, as far even as 50 per cent below normal at times.

The Allegheny and Pocahontas regions were formed out of the Eastern region in June, and the problems of these two regions have already been described at some length in the *Railway Age*. The carving out of these two new regions, left the Eastern region a somewhat oddly formed territory. This territory was divided into three districts: the New England district, under James H. Hustis as district director; the Ohio-Indiana district, which included both the Cleveland, Cincinnati, Chicago & St. Louis and the Pennsylvania lines west, under H. A. Worcester, formerly vice-president of the Cleveland, Cincinnati, Chicago & St. Louis; and the Central district, under A. T. Hardin. This left, of course, former New York Central officers predominating in the regional organization. The Pennsylvania lines west and the Pennsylvania Railroad, itself, were still, in June, July and August, under very heavy pressure. Even as late as August 27, 1918, the traffic officers of the Pennsylvania lines west issued a circular approved by G. L. Peck, federal manager, as follows:

"The volume of raw materials and finished products essential to the war program has reached such immense proportions in the Pittsburgh district that there is no transportation capacity left for the handling of other car load traffic through the district, either eastbound or westbound, which it is possible to divert via other routes.

"Beginning at once, eastbound car load traffic should, to the fullest extent possible, be diverted to other available routes, and, where practicable, shippers should be requested to use other initial lines, the routes of which will avoid the Pittsburgh gateway.

"The use of the Pittsburgh gateway should be similarly restricted on traffic originating on connecting lines.

"The general rule contained in the book of general instructions for the government of agents, which instructs agents, when routing is not otherwise ordered, to forward freight via the route paying the Pennsylvania system roads the most revenue, is superseded with respect to the traffic referred to herein, and available routes via short-haul junctions should be utilized."

The Central District

During the entire year, 1918, the New York Central made a very good showing comparatively. In the editorial review of the annual report of this company, appearing elsewhere, an attempt is made to analyze the reasons for this, but it is proper to say here that the generous provisions which had been made for motive power and rolling stock for the New York Central were a most important factor. During the severe winter weather, the northern lines were not so completely prostrated as were the southern lines of the Eastern region. Officers and employees were, apparently, more accustomed to the very low temperatures and high winds than were the railroad men of the southern lines. This, of itself, was a help to the New York Central, and, coupled with the fact that they had a greater margin of equipment to fall back on, gave the organization a feeling of reliance that may have been lacking on a road like the Erie, for instance, which was short of power.

The Erie

The Erie situation is particularly interesting. Under F. D. Underwood, a crooked, high-grade, single track, run-down railroad was transformed into a New York-Chicago double-track, modern, fairly low-grade trunk line. The financial difficulties that had to be overcome were appalling; and the road was on the verge of bankruptcy more than once. A transportation machine was built up, capable of handling, except for locomotives, much more traffic than the road was getting in 1910 to 1913. In the working out of keen competition for freight, the Erie, with its uncongested through line, bid for and received a very large share of the fast freight between Chicago and New York. Refrigerator business, both fruit and dressed meats, came to it in large quantities. This is an expensive business to handle, both because of the speed required and the large proportion of tare weight (also empty car movement) which it involves. Had conditions remained normal, the Erie might have succeeded in building up a freight business to fill in its capacity and profitably retain a good part of its fast freight business. War conditions intervened, however; the Erie had become known as a fast freight line. Business, which had to be moved at great expense, was dumped on to it at first by the manufacturers of munitions and supplies for the Allies, and later when the United States government took over the roads, the Erie had to carry a large proportion of perishable freight and other traffic which required high speed and a high proportion of tare weight to load.

The amount of freight which the Erie has handled, as reflected in its gross earnings, was very large, but this does not begin to show the increase in gross tonnage (revenue tonnage and weight of equipment) which the road handled.

New England District

New England has often been likened to a great receiving yard, and the simile is a good one. To every hundred loaded cars received, only about 75 are sent out. The greatest problem was to get coal into New England for the great number of munition and arms factories in that district and for the vast number of other industries of the district engaged in war work. For a period of two years, the coal tonnage brought into New England was doubled. This, in itself, is an achievement which the railroads of that district may feel justly proud of.

There was little roundabout routing of freight within New England, even before government control. The Boston & Maine was being gotten into good shape before the beginning of 1918; the smaller roads were in general in quite good shape as compared with the character of traffic they were called on to handle. The Boston & Albany was in fine shape, but the New York, New Haven & Hartford was still in a process of rehabilitation after years of operation as an adjunct to banking schemes and plans of consolidation, all of which may have been for the good of New England in the long run, but which had so overshadowed the operating necessities of the road as to make the problem of the successors to former President Mellen a difficult one. A serious congestion in this great receiving yard would have tied up New England industries to a disastrous extent.

The problem of preventing congestion within New England was met in what appears now, in the light of more than a year's experience, the only safe and practical way. Permits were issued to shippers outside of New England to ship to New England ports, only when there was a reasonable certainty of boat accommodations being provided to handle expeditiously the freight that was so consigned. The New England district management took upon itself the task and responsibility of ascertaining the capacity of ships due and sailing dates, nature of cargo, etc., and permits were issued for freight to move into New England for export in the light of this information. The Railroad Administration was

helped by the fact that little, if any, United States government freight was shipped through the port of Boston. In the first years of the European war, large shipments came down to Boston from the Canadian roads, but by the time the New England district was formed, the Canadian roads were in shape to handle the business for export largely through their own ports, although all during 1918 considerable Canadian traffic found its way out through Portland.

It was not, therefore, a hard thing, so far as physical elements went, to control the flow of traffic into New England. The very fact that the district director had, what might be called a strangle hold on the manufacturers of New England, made the exercise of his authority liable to be particularly irritating. It is a remarkable tribute to the personality of the district director that a free and quite drastic exercise of this authority did not, to any alarming extent, stir up antagonism in New England. Without repetition, or without going at great length into details, it is impossible to draw a clear picture of the extent and intensity of the difficulties which were overcome in handling this New England situation. The people of New England are prone to be severe critics, as presidents of New England railroads have found in the past. On the other hand, they are amenable to reason and have a strong sense of fair play. They have had, in the past, some examples of poor railroading, but showed themselves, during 1918, capable of understanding and appreciating good railroading.

The record made in handling the situation in New England with the New Haven still under the cloud of the Mellen regime and the Boston & Maine in receivers' hands, with a dangerous coal shortage and unprecedented business activities, should go down in the history of American railroading as one of the achievements of which railroad men may well be proud.

The Ohio-Indiana District

On June 1, the committee at Pittsburgh, mentioned heretofore, of which J. J. Turner of the Pennsylvania was chairman, was abolished; and H. A. Worcester was appointed district director. At this time, the Pennsylvania lines west had an accumulation above normal of about 15,000 cars eastbound and 500 cars westbound. The problem before the district director, therefore, was one of immediately relieving this situation. Both the Baltimore & Ohio and the Erie were used to divert cars; the Baltimore & Ohio at Columbus for movement to Harrisburg, and the Erie and the New York Central for westbound business. By July 8, the situation had been cleared up and embargoes were lifted. The Cleveland, Cincinnati, Chicago & St. Louis during the whole of 1918, was in particularly good shape. Some account is given elsewhere of the rehabilitation of this road following the floods of 1913. Heavy purchases of equipment in 1916 and 1917 were a very important factor in the operation of the property under its federal manager, and the ability of the road to handle increased business was an important factor in the operation of the entire Ohio-Indiana district.

Conclusion

It should be said in conclusion that the organization which the eastern regional director formed immediately on taking charge, contained every evidence of a desire to handle the situation with as little disturbance of the rights of each of the individual roads in this territory as was possible. Drastic measures were needed and no hesitancy was shown in applying these measures. A. H. Smith, in accepting the eastern regional directorship, took upon himself war duties of a peculiarly trying nature where failure might have meant unspeakable disaster. He carried these duties out with a fearlessness that has won admiration from railroad men all over the country as well as government officers with whom he has dealt and with whom he has been on the best of terms.

Some Interesting Features of Federal Operation*

Some of the Critical Situations Which Confronted the Railway Administration in Meeting War Time Needs

By Carl R. Gray

President Western Maryland Railroad Company; Formerly Director of Operation, U. S. Railroad Administration

WHY were the railroads taken over by the government? The reasons were three-fold: The first was financial, the second was because of the necessity for a stabilization of the labor situation, and the third was because of the utter impossibility of their functioning as corporations in the matter in which the government demanded and needed.

Three serious situations confronted us at that time. The volume of business late in 1917 was very great, while about December 1 we went into the longest continued, and most severe weather conditions of which the Weather Bureau has any record. This continued until practically the latter part of March. We had at Hampton Roads (Norfolk and Newport News), for nearly three months, frozen coal in the cars, where they never had a frozen car of coal in all the history of that part of the country.

Coal Situation Serious

The coal situation was the most serious. The stock had been largely used up. New England ordinarily depends upon coastwise shipping for its coal, and the coastwise ships had been taken for overseas traffic. That presented the most serious single situation at that time, because, in addition to the industrial danger, there was absolute fear of suffering. For several months we were on the verge of real suffering in that northern part of the country. The production of the year previous had been the record one up to that time, larger by 12 per cent than the preceding year and aggregating 544,000,000 tons of soft coal.

The Fuel Administration advised us that, to meet absolute necessities, there had to be produced 635,000,000 tons of soft coal. The Railroad Administration took hold on the 28th day of December, 1917. At that time, weather conditions were frightful, beyond comparison. We had a passenger train, as I recall, stuck in the snow in the streets of Syracuse. Up to that time, the northern lines from Buffalo were subjected to the least strain from the war conditions, and had been our safety valve; but with the severe weather conditions, they, too, became affected, so that in the month of January we fell behind 79,000 carloads of coal.

The most drastic measures had to be adopted, and the use for other purposes, of that class of cars which would load coal, had to be denied to everybody. The railroads which had the greatest potentialities in the production and transportation of soft coal had to be isolated as trunk lines. It became necessary to cut in two the great Pennsylvania line, and the Baltimore & Ohio system, so as to enable them to devote their entire energies to the movement of soft coal.

In the month of February, we got on our feet with the production of soft coal. In that month we increased over the record year 24,366 cars. In March 13,000; April, 64,000; May, 27,000; June, 92,000; July, 150,000; August, 160,000; September, 128,000.

Now, what was done in the handling of coal was also reflecting itself in the production of steel. The steel curve commenced to go downward in September, 1917; it went down at an alarming rate; the curve of actual coal production went down from October, 1917, even more radically. Of course,

the one depended absolutely upon the other. Seventeen per cent of the blast furnaces were shut down in January for want of fuel and before that situation could be gotten in hand 22 per cent was reached on February 1. The blast furnace is the basis of steel production and of course steel is the most essential of all products used in connection with the war.

Allies Food Shortage Threatened to End War

The food situation can hardly be overstated; we had to watch New England, but in some way the seriousness as affecting the European situation had not been fully appreciated. On the night of February 8, the director general told me that a committee from the Council of National Defense had asked to see him at nine o'clock the next morning; but that he had to go to the capital, so he had asked them to see me. At nine o'clock two cabinet ministers, the chairman of the Shipping Board, the food administrator and the fuel administrator came in. They had cablegrams from the three Premiers of Great Britain, France and Italy to their respective ambassadors, stating that unless the food program promised by Mr. Hoover was not only maintained, but the deficiency made up, that the war would be over on April 1. I asked Mr. Hoover what he had promised, and he said 1,160,000 tons a month, commencing with January 1.

I said: "How much have you furnished?" He said: "In January 750,000 tons; February is one-third gone, and we are going at the rate of 500,000 tons; so unless the situation is remedied, we will reach the first day of March over 1,000,000 tons short. There is just one month between that time and the time these gentlemen have given as the ultimate date." The message from the French Premier said that the French rations had been reduced to the armies in the field; the Italian message said that the rations had been reduced twice to the armies in the field, and could not be again reduced. Mr. McAdoo approved the action that was recommended, and that night an order was sent out which absolutely forbade the loading of box cars, except at freight houses, for anything except food. That was carried to the extreme that we went into the large industries in the East and in the Southeast, and pulled out the empty cars where they had been placed to load. We set out trains of loads, and we moved those empties in preference to everything. While this condition existed, from February 9, with all its rigor until March 1, and in a more elastic form until the 15th of March, there was not one single complaint made by anybody in the United States that reached Washington with regard to it. That order remained in effect, the only exceptions being on behalf of the War Department, until about March 1. Then it was relaxed somewhat. On March 15, we had every elevator on the Atlantic coast filled with grain, and we had 6,615 cars of other food up against the seaboard. I don't believe I ever dictated a letter in which I took so much genuine satisfaction as I did the letter which I dictated for Mr. McAdoo's signature, to the three ambassadors, in which I called attention to this former call of theirs, and to the representations made at that time, and called their attention to the 6,615 cars up against the water-front. And then, as a sort of a stinger, I added to the letter that while we would regard with the most serious concern the placing of an embargo on food

*Abstracted from an address delivered before the St. Louis Railway Club on April 22, 1919.

for the Allies, unless they could improve the situation, we would be compelled to take that action. From then until the armistice was signed, which, of course, means for all time, there never was a moment when there was a lack of a large surplus of food for the Allies against our seaboard.

Congestion on Eastern Lines

Another interesting feature was the movement of troops. At the time we were struggling with the coal and food, we were at the same time facing a most acute situation which arose with regard to transportation of troops. We were advised by the military authorities that they had arranged for the immediate movement overseas of 1,000,000 of troops.

I would like you to visualize that situation for a minute; the congestion in the United States was all in one locality. Everything else in the shape of blockades was a reflex of that condition. If you draw a line from Portland, Me., to Albany, N. Y., and over to Rochester, down to Harrisburg, and over to Baltimore, east of that line, you have it all.

There were, when the Railroad Administration took hold, in the territory east of Chicago and St. Louis and north of the Ohio and Potomac Rivers, 62,247 delayed loads; that means loads delayed short of their destination and which it was not possible to move, and which had not moved within 24 hours. There was held at and west of St. Louis 31,421 cars; at and west of Chicago 24,000 odd; at and south of the Ohio River gateways 14,000 odd; south of the Potomac River gateways 15,000 odd. There was a total of 148,810 delayed loads; nearly all for the limited territory I have outlined. The War Department decided to move practically all of those troops to New York, and therefore it meant an added load in this congested territory. From the first of January to the time of the armistice, the railroads moved a total of 6,496,000 troops, and the maximum was in July, when we moved 1,147,013 men, an average of 748 miles each. That is the largest troop movement ever made in the history of the world. A large proportion of these men were brought entirely across the continent. It takes 59 trains of passenger and 59 trains of impedimenta to move a division of troops.

One of the difficulties that brought the railroads into the congestion, in the first place, was the peculiarity of their responsibilities as common carriers. Now, when that was complicated by the war power of the government to require its freight to be moved in absolute preference and priority, and then when you turn loose a swarm of young men clothed in uniform, invested with the power of the United States government on the railroad men of this country who are, in themselves, taught to respect authority, and each one of those officers functioning with respect only to his individual interests, you can very readily see one of the causes of congestion of the railroads.

We tried, at Pittsburgh, before federal control, to carry out instructions; and we put a switch engine at work there at Pitcairn, on the Pennsylvania, to carry out the instructions with respect to strict priority. That engine switched an entire day—and got out seven loads. That is just a sample of what was done in a yard which ordinarily handled from five thousand to seven thousand cars. So that it was absolutely impossible to carry out our work under those circumstances. We hear a great deal of discussion of the question of whether or not the handling of the railroads was economical. I do not need to tell you that there was not anything economical about it; there is nothing economical about war; war itself is a waste, as is everything connected with it. Transportation was wasted; it had to be wasted, to do these things which this government needed to have done.

The Labor Situation

The other situation that I referred to was the matter of labor. Railroad men, as a class, have never been equitably paid; there is not a man of us who has had to handle large

numbers of railroad employees who has not felt that, outside of the specialized classes of railroad men, we were a training school for the other industrial activities of this country. When the Wage Commission was appointed by the director general to go into this question it found that of 2,000,000 employees, 51 per cent received under \$75 a month; and that 80 per cent, 1,600,000 of the 2,000,000, got less than \$100.

The Lane Commission was appointed, and made its findings admittedly on the ground of justice, as distinguished from the equitable arrangements and relationships as between wages which had grown up in the railroad business. They took the man's earnings, instead of his rating. Where a man in a certain class was working longer than any other, you can see that his average earnings would be larger, while their rating would be the same. For instance, a fireman would work ordinarily more regularly than a brakeman. While the rates were relatively the same, the average earning of the fireman was greater; that penalized the firemen, in that award, because they started in with the \$50 earnings basis; all earnings of \$50 or lower were given a flat increase, I think of about 45 per cent; from that it went up in the shape of a cone, until it reached \$250 a month and higher, where they allowed no increase. It resulted in giving conductors 12½ per cent increase and brakemen 39½ per cent increase, thereby overturning the relationship between those classes of employees which had always been adjusted with respect to each other. The firemen were raised 34½ per cent; the engineers 11½ per cent, so the firemen went out of relationship with the engineers; the firemen went out of relationship to the brakemen; the engineers were out of relationship to the conductors. One of the grotesque results was that we had in the West, firemen earning more money than the engineers on the same engines; and there were other applications of rates on these different bases.

The Wage Commission recognized that this would happen as a result of these readjustments, and it also left for future consideration any question of the competition that we had to meet with respect to other industries—notably the Shipping Board. With regard to the mechanical crafts, we were paying all the way from 35 cents an hour on some railroads to 53 cents an hour, the highest rate for skilled mechanics. The Shipping Board and the ship-building companies were paying from a minimum of 74 cents up to 93 cents—and there was no question of skill. A man who could learn to run a riveting hammer or who could drive a nail and handle a saw was a mechanic, and got those rates.

Now, the result was that most of the best men had been drawn out of our shops; only the older men, and those with strong home ties remained. In fact, the more or less inefficient men were left to us. That was the first adjustment which had to be made.

When the rate was put up to 68 cents it was still 6 cents under the lowest rate paid by the ship builders, and it was worthy of note that their rate was almost immediately increased to a minimum of 80½ cents.

The government has a great many disabilities to work under when it comes to the handling of labor. One is that it must be consistent. You cannot say to a man when you have one employed who is repairing a Maine Central car on the Florida East Coast that he should be paid any differently or under any different conditions from a man who is repairing a New York Central car on the Grand Trunk; so that the government, after all, was forced to an even level with those things. The law of supply and demand which can obtain where there is individual employment is almost eliminated in this case, on the part of the government. It also means this—it is one of the most striking features, it seems to me, of the inadequacy of government operation,—that it has to be on a dead level. And, if you are short of men in a competitive territory, you have to let it go; otherwise, it means that you

have got to make a raise over the whole country. Of the different things which I encountered which satisfied me that federal operation of all of the railroads would be an economic mistake, that was the most effective.

There was another peculiar development: When the director general took hold, he said to the railroad employees, "You must not strike; it is unspeakable—it is unthinkable that men engaged in transportation shall be permitted to strike against their government."

They very promptly said to him: "What are you going to give us in place of this right? Because there is where our protection comes; our contracts provide that we shall carry our grievances through to a certain designated officer of the railroad, and then in default of an equitable adjustment we have a right to strike; now you take that away, and you leave us absolutely at the mercy of the railroad officers."

The result of that was the selection, first, of Board of Adjustment No. 1 for train and enginemen, which was a bi-partisan board; there were four railroad officers, all expert in the handling of labor matters; they were geographically selected from the different branches of railway service, and there were four labor men, one from each of the four big organizations.

When these men were selected, Mr. Carter, the Director of the Division of Labor, and I spoke to them; we told them that they were expected to construe as would a supreme court the contracts which each of the different railroad companies had with the employees in that service. The manner in which it should be handled was stipulated; it was to be presented in an orderly way, and satisfactorily to all sides, and it supplied this agency in place of the right to strike, which had been arbitrarily withdrawn.

The result of that is very interesting. When I left Washington, Board of Adjustment No. 1 had rendered 210 decisions, and not in one single case had there been a dissenting vote. It had been absolutely unanimous.

It seems to me that men have to be pretty dumb if they let an object lesson like this pass by. Out of all this is certainly going to come some advantage—from this experience we have had with an even balanced bi-partisan appellate court.

The point about it is that one side or the other does not dare to bring a matter in there without having a very strong element of justice involved. One of the difficulties that we observed was that the railroad officers themselves were not as careful about preparing their cases as the men were. This is a thing, of course, which very easily adjusts itself; but I have believed that under such a system employed in the United States, there could be better discipline, and that the subordinate officer, if he conceived this thing in the right spirit, would feel impelled to apply discipline under this principle

very much more than he would under the old plan, because he never knew then, whether above him, somewhere, might not be an officer who would be weak enough to give way and practically nullify his use and value. Here is an evenly balanced court of final resort, and you have to win over one side or the other—one, at least, before you can get a decision.

I would be very derelict in my duty if I did not say that the men who stood behind this movement and supported it in every way, who worked themselves beyond anything that they had ever done before, to hold up the highest traditions of the profession, were the railroad officers. By a strange fate, in this case, they were the last to be recognized.

I wish I could tell you many of the things that came to the surface when the Railroad Administration was forming—all the complaints that came to Washington, personally and generally, in which the director general was solemnly advised that the railroad officials were laying down on him—cases in which he was told that they purposed to deliberately defeat all the plans of the Administration.

Anybody but a man eminently well poised would have been stampeded by the situation. But the time came, after he had made trips over the country and had met these officers, when, with the greatest gratification, he told me that in all his life he had never met a set of men who so measured up to what the emergency required as the railroad officers of this country.

Railway Administration

Collects Tie Statistics

C. A. MORSE, assistant director maintenance in charge of engineering and division of operation, United States Railroad Administration, has collected statistics showing the number of ties inserted for maintenance purposes by the roads under federal control separately for the three years of the test period, for the ten fiscal years from 1908 to 1917, inclusive, and for the calendar years 1917 and 1918, on the basis of which he has prepared an estimated program of renewals for this year. From the summary of this information, given herewith, it is noted that the average renewal of ties per mile of track for all roads under federal control for ten-year period (258) varies by only one per cent from that of the test period (261). The serious handicap under which the maintenance department labored in 1917 is indicated by the fact that a renewal of only 224 ties is shown, a decrease of 14 per cent, while in 1918 this figure was only 214, or a decrease of 18 per cent from the standard of the test period. To take up this deficiency the estimated program for 1919 contemplates the replacement of 282 ties per mile or eight per cent above the standard established by the test period.

STATISTICS OF TIE RENEWALS ON ROADS UNDER FEDERAL CONTROL

Region	Mileage			Test period				Average, ten fiscal years 1908-1917
	Main tracks	All tracks	Per cent sidings to all tracks	Years ended			Average test period	
				June, 1915	June, 1916	June, 1917		
Eastern	45,093	68,795	34	21,418,229	15,437,157	14,477,924	17,046,906	17,439,624
Allegheny	28,222	44,056	36	12,365,703	11,203,789	10,250,718	11,279,377	10,356,666
Pocahontas	6,060	8,887	32	3,467,486	3,629,486	3,175,235	3,432,515	2,532,878
Southern	41,316	55,420	25	18,436,374	18,710,978	16,166,189	17,782,366	16,879,416
Southwestern	32,808	43,622	25	12,905,094	14,530,062	10,936,410	12,765,499	13,089,762
Central Western	53,956	71,818	25	17,518,794	18,044,571	15,011,501	16,850,922	17,201,663
Northwestern	52,370	71,130	26	15,820,199	16,655,411	14,592,271	15,657,858	14,793,386
Total, All Regions.....	259,825	363,728	29	101,931,879	98,211,454	84,610,248	94,835,443	92,293,395

Region	Calendar			Average ties per mile—all tracks				
	year 1917	year 1918	Estimate, year 1919	Test period (Average)	Ten years (Average)	Calendar year 1917	Calendar year 1918	Estimate year 1919
Eastern	14,716,486	14,490,867	18,968,941	248	254	214	211	276
Allegheny	8,017,991	7,619,407	12,259,789	256	237	182	173	278
Pocahontas	2,945,760	2,575,800	3,129,640	387	287	335	289	352
Southern	15,597,217	14,495,516	20,951,893	321	315	282	262	378
Southwestern	10,683,613	9,634,298	11,626,191	293	309	245	221	267
Central Western	14,579,825	15,812,793	17,930,719	235	243	203	220	251
Northwestern	14,870,492	13,048,624	17,231,525	220	208	209	183	243
Total, All Regions.....	81,411,384	77,677,305	102,098,698	261	258	224	214	282

Mileage as of December 31, 1918, and is mileage maintained.

Total "Average Test Period" includes eighty-four small roads with 6,847 miles and 1,625,896 ties, which roads do not enter total "Average Ten Years" because of incomplete reports.

Federal Control of Rates Upheld by Supreme Court

THE POWER OF THE PRESIDENT, exercised through the director general of railroads, to establish rates for application to intrastate as well as to interstate traffic, superseding the authority of the states, was upheld by unanimous decision of the United States Supreme Court rendered on Monday. The decision specifically upheld the freight and passenger rate increases made by order of Director General McAdoo last June, and decrees of the North Dakota Supreme Court enjoining the Northern Pacific Railroad and Director General Hines from enforcing the order in that state were reversed. The court ruled against the decision of the lower court that held that the existing intrastate rates and regulations were left in effect as the exercise of police power. The federal authority was sustained on the ground that it was the exercise of a war power and that to construe it as being limited by state authority would be but to deny its existence. In a similar opinion the court sustained the federal government in establishing telegraph and telephone rates for intrastate business, but from this opinion Justice Brandeis dissented. The opinion of the court in the railroad case was given by Chief Justice White.

"No elaboration," Chief Justice White said, in rendering the opinion, "could make clearer than do the act of Congress of 1916, the proclamation of the President exerting the powers given, and the act of 1918 dealing with the situation created by the exercise of such authority, that no divided but a complete possession and control were given the United States for all purposes as to the railroads in question.

"But, if it be conceded that, despite the absolute clarity of the provisions concerning the control given the United States, and the all-embracing scope of that control, there is room for some doubt, consideration of the general context completely dispels hesitancy. How can any other conclusion be reached, if consideration be given the comprehensive provisions concerning the administration by the United States of the property which it was authorized to take, the final obligations under which it came, and all the other duties and exactions which the act imposed, contemplating one control, one administration, one power for the accomplishment of the one purpose, the complete possession by governmental authority to replace for the period provided the private ownership theretofore existing? This being true, it must follow that there is no basis for the contention that the power to make rates and enforce them, which was plainly essential to the authority given, was not included in it.

"Conclusive as are these inferences they are superfluous, since the portion of Section 10 in express terms confers the complete and undivided powers to fix rates.

"A brief consideration of the contentions relied upon to the contrary will at once show the mistaken premises upon which they rest. Besides, the presumption in question but denied the power exerted in the adoption of the statute and displaced by an imaginary hypothesis the dominant presumption which arose by operation of the Constitution as an inevitable effect of the adoption of the statute, as shown by the following:

"(A) The complete and undivided character of the war power of the United States is not disputable. On the face of the statutes it is manifest that they were in terms based upon the war power, since the authority they gave arose only because of the existence of war, and the right to exert such authority was to cease upon the war's termination. To interpret, therefore, the exercise of the power by a presumption of the continuance of a state of war limiting and controlling the national authority was but to deny its existence.

"(B) The elementary principle that under the Constitution

the authority of the government of the United States is paramount when exerted as to subjects concerning which it has the power to control, is indisputable. This being true it results that, although authority to regulate within a given sphere may exist in both the United States and in the states, when the former calls into play constitutional authority within such general sphere the necessary effect of doing so is that, to the extent that any conflict arises, the state power is limited, since in case of conflict that which is paramount necessarily controls that which is subordinate.

"Again, as the power which was exerted was supreme, to interpret it upon the basis that its exercise must be presumed to be limited was to deny the power itself.

"Thus, while admitting that the power which was conferred to initiate rates, when considered in and of itself, included all rates, it is nevertheless said that such power must be presumed to be limited to the only character of rates which under the prior law the Interstate Commerce Commission had the power to consider, that is, interstate rates, because the new rates, when initiated, were to be acted upon by that body. As, however, the statute in terms gives power to the Interstate Commerce Commission to consider the new rates in the light of the new and unified control which it creates, the error in the contention becomes manifest, even putting out of view the fact that by the effect of the duty imposed and the new control created the new rates applying to the new conditions were within the purview of the power which the Interstate Commerce Commission previously possessed.

"The relief afforded against the officer of the United States proceeded upon the basis that he was exerting a power not conferred by the statute, to the detriment of the rights and duties of the state authority, and was subject therefore to be restrained by state power within the limits of the statute. Upon the premise upon which it rests, that is, the unlawful acts of the officer, the proposition is undoubted, but in view of our conclusion the acts of the officers complained of were authorized by the law of the United States."

The court lost little time in arriving at a conclusion in these cases, which were argued on May 5. The railroad case was selected as a test to determine a difference of opinion between the director general and the state authorities.

L. E. Shepherd, heretofore vice-president, was elected grand president of the Order of Railroad Conductors, at the convention of that brotherhood in St. Louis, on May 29, succeeding A. B. Garretson.



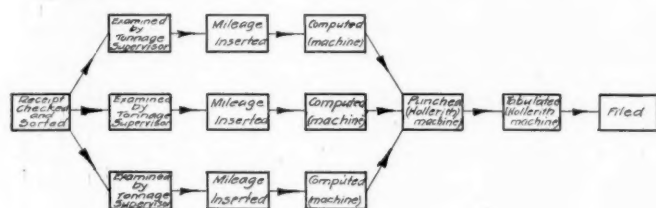
Turkish Refugees Fleeing Towards Constantinople

Compilation of Operating Statistics Reports

The Value of These Reports Depends on Promptness and Care in Obtaining the Basic Figures

THE SEVEN REPORTS called for by the Operating Statistics Section of the Division of Operation of the United States Railroad Administration have been in use since August, 1918. Although the forms used for making these reports are standard for all roads, there is a considerable difference in the methods used in gathering the figures and working these figures up. Where the names of roads are used in this article, it is not meant to imply that other roads may not be using just as good or better methods.

While the operating statistics are for use by the central and



8:00 A.M. 5:00 P.M.

Method of Handling Statistical Reports in Delaware & Hudson Office.

regional administrations as a check on each road under a federal or general manager, it is the consensus of opinion of the operating officers, with whom the *Railway Age* has been corresponding on this subject, that these statistics are of great direct value to division superintendents, general superintendents and general managers.

The first five forms deal with freight and passenger train performance, locomotive performance, and car performance. Locomotive performance is supplemented by a report O.S.-4

On some roads the conductors' wheel reports are mailed directly to the car accountant's office, where the necessary mileage and tonnage information and potential tonnage are added and the multiplications and divisions are made generally by some kind of mechanical calculating device. On other roads the train dispatchers' sheets and conductors' wheel reports are received in the superintendent's office and the figures transferred there to daily reports of train performance with weekly or monthly summaries of these reports.

For instance, on the Lehigh Valley the statistics for OS-1, except light locomotive mileage, are compiled in the division offices daily, where a report is made showing individual train performance. This report is forwarded to the superintendent of transportation, where it is checked and the locomotive mileage entered to the credit of individual locomotives. Totals of the daily reports are transferred in the superintendent's office to a summary sheet covering four periods, the first three of seven days each and the fourth the remainder of the month. These summary sheets are sent to the superintendent of transportation's office at the end of each period and are checked and returned to the division office to have the next period entered. When the month is complete the sheets are retained by the superintendent of transportation.

The Illinois Central is another example of a road working up the original data in the superintendent's office. On the Illinois Central all the figures for OS-1, OS-2 and OS-3, with the exception of items 5, 16 and 26, and OS-5, with the exception of items 1-6, inclusive, are worked up in the division superintendent's office from conductors' wheel reports, dispatchers' train sheets, time slips, and master mechanics' or foremen's reports. The forms OS-1 to OS-5, inclusive, are actually filled out in the car accountant's office, to which

UNITED STATES RAILROAD ADMINISTRATION, W. G. McADOO, Director General of Railroads											
CHICAGO, ROCK ISLAND & PACIFIC RAILROAD											
CHICAGO, ROCK ISLAND & GULF RAILROAD											
MECHANICAL DEPARTMENT											
Telegraphic Report of Power Detention for 24 hours ending											
At 11:59 P. M. 19__ Locomotives in service on Division											
Class of Service	Locomotive Number	Time Arrived At Assigned Truck	Time Arrived In House	Time O.K.'d to Trans. Dept. For Service		Time Accepted For Service by Transportation Department	Time Placed on Assigned Truck	HOURS HELD		CAUSE OF DELAY Mechanical Dept.	CAUSE OF DELAY Transportation Dept.
				At	For			By or On Order of Mech. Dept.	After reported Ready by Mech. Dept. for Service From Trans. Dept.		
1											
2											
25											

This report must be signed jointly by the Roundhouse Foreman and Yard Master and telegraphed daily by symbols to the Chief Dispatcher.

SEE INSTRUCTIONS ON REVERSE SIDE OF THIS FORM

Roundhouse Foreman Yardmaster

Power Detention Report

on the distribution of locomotive hours. The basic information which is required, in regard to freight train performance, is the train mileage divided as between east and west, together with the locomotive miles and car miles, the gross and net ton mileage and the train hours. All of this information may be obtained from conductors' wheel reports, or these reports may be supplemented by train dispatchers' sheets and enginemen's time slips. A number of roads use train conductors' wheel reports only, and these reports are checked against a train roster to check against errors in not reporting trains in.

the reports mentioned above are sent. Thus freight conductors arriving at the end of their run detach the narrow sheets from the broad copies of their wheel reports (the broad or large sheet is shown herewith) and forward them to the car accountant so that there may be no delay in posting the movements of cars. The conductors then send the large copies to the superintendent's office, where the basic data is drawn off, as shown on Illinois Central form 1038; the large copies are then sent to the car accountant's office to be filed.

On the Southern Pacific train miles and locomotive miles

UNITED STATES RAILROAD ADMINISTRATION
W. G. MCADOO, DIRECTOR GENERAL
Lehigh Valley Railroad

Train	Engine	Locomotive	Passenger	Freight	TO	FROM	Time		Time		Time		Time		Time		Time		Remarks
							Start	End	Start	End	Start	End	Start	End	Start	End			

Freight Train Performance

UNITED STATES RAILROAD ADMINISTRATION
W. G. MCADOO, DIRECTOR GENERAL OF RAILROADS
LEHIGH VALLEY RAILROAD
LEHIGH VALLEY RAILROAD
BUFFALO CREEK RAILROAD

Daily Summary of Freight Train Performance.

Date	Train		Engine		Locomotive		Passenger		Freight		Time		Time		Time		Time		Remarks
	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End			

Daily Summary of Freight Train Performance

UNITED STATES RAILROAD ADMINISTRATION
WALKER D. HINES, DIRECTOR GENERAL OF RAILROADS
Illinois Central Railroad—Yazoo & Mississippi Valley R. R.
DAILY REPORT OF ALL FREIGHT TRAINS:

INSTRUCTIONS

1. This report is to be made up in following order: (a) Freight trains, (b) Passenger trains, (c) Non-revenue trains, (d) Work trains, (e) Light engines, (f) Miscellaneous. 2. When a regular train is abandoned, let it be shown on sheet with word "abandoned" with cause. 3. When a foreign engine is used five initial, "F", must be shown in column of engine. 4. When more than one engine is used in a train, the regular engine must be shown in column of engine, and the other engines in column of "Other engines". 5. When a train is abandoned, let it be shown on sheet with word "abandoned" with cause. 6. When a foreign engine is used five initial, "F", must be shown in column of engine. 7. When more than one engine is used in a train, the regular engine must be shown in column of engine, and the other engines in column of "Other engines". 8. When a train is abandoned, let it be shown on sheet with word "abandoned" with cause. 9. Opposite Light Engines show reason moved in column of remarks. 10. Work Service freight trains are divided into "Work" and "Freight". "Work" is for trains carrying material for the road, and "Freight" is for trains carrying material for other purposes. 11. All entries must be checked with classifying agent and reported accordingly.

Train No.	Engine No.	Locomotive	Passenger	Freight	TO	FROM	Time		Time		Time		Time		Time		Time		Remarks
							Start	End	Start	End	Start	End	Start	End	Start	End			

Daily Report of All Freight Trains

ROCK ISLAND LINES.—TRAIN DISPATCHER'S DAILY REPORT OF TRAIN AND ENGINE MOVEMENTS

INSTRUCTIONS.

1. Original report to be forwarded to Car Division each day as soon as all trains have cleared.
2. Abandoned trains must be shown on sheet with word "abandoned" with cause.
3. When a foreign engine is used five initial, "F", must be shown in column of engine.
4. When more than one engine is used in a train, the regular engine must be shown in column of engine, and the other engines in column of "Other engines".
5. When a train is abandoned, let it be shown on sheet with word "abandoned" with cause.
6. When a foreign engine is used five initial, "F", must be shown in column of engine.
7. When more than one engine is used in a train, the regular engine must be shown in column of engine, and the other engines in column of "Other engines".
8. When a train is abandoned, let it be shown on sheet with word "abandoned" with cause.
9. Opposite Light Engines show reason moved in column of remarks.
10. Work Service freight trains are divided into "Work" and "Freight". "Work" is for trains carrying material for the road, and "Freight" is for trains carrying material for other purposes.
11. All entries must be checked with classifying agent and reported accordingly.

Train No.	Engine No.	Locomotive	Passenger	Freight	TO	FROM	Time		Time		Time		Time		Time		Time		Remarks
							Start	End	Start	End	Start	End	Start	End	Start	End			

Dispatcher's Daily Report

Car miles, gross ton miles and net ton miles are abstracted daily from conductors' car and tonnage reports. Separate abstracts are made for each train operated, abstracts printed in black being used for eastbound movements and printed in

Fuel Ticket

The Delaware & Hudson revised its conductors' reports so as to show all the basic information required for OS-1. By recording this information on a Hollerith card, an analysis can be made of statistics by classes of engines, trains and train runs, etc. The Delaware & Hudson, however, gets its locomotive and train mileage statistics not from conductors' wheel reports, but from enginemen's mileage reports to the office of the auditor of disbursements.

The reports, which are for the greater part received on the night trains, are sorted into operating divisions by the regular night car record office force, and their receipt is checked against a report made by the superintendents showing all trains run, thus insuring the receipt of a report for each.

The reports for each division are first inspected by a tonnage supervisor, who is a man with considerable transportation experience, particularly as to the apparent accuracy of the information shown in columns 11 and 12, as well as the accuracy of the report in general. As an example, if a train moves from terminal "A" to terminal "B" and handles 73 cars with but one engine reported, the tonnage supervisor detects an error at once, as his familiarity with the operation of that district tells him that this number of cars would require a pusher, which through error had been omitted from

Engineman's Daily Report of Locomotive Mileage

The insertion of mileage, distance between points which cars move, is simply a matter of routine. Comptometers are used for computing these reports, all work on each report being completed at one operation; that is, accumulated total of tons being multiplied by distance, giving ton miles, etc. The punching and tabulating is done on the Hollerith machines. The practical advantage claimed for the method of handling as outlined is that at the end of the second work day following the operation, figures are available showing by

directions, divisions, tonnage rating districts and train runs the following:

- (a) Train loading efficiency (per cent of gross ton miles to rating ton miles).
- (b) Train movement efficiency (gross and net ton miles per train hour).
- (c) Locomotive efficiency (gross and net ton miles per serviceable locomotive).
- (d) Car handling efficiency (net ton miles per car per day).

This information is available within 72 hours from the time of the events which it records.

anthracite and bituminous. On the Erie the OS-3 reports are made up in the auditor of disbursements' office, while on the New York, Chicago & St. Louis the report is prepared by the mechanical department and forwarded on the 10th day of the month following that in which the report is made.

On the Missouri Pacific the fuel agent makes up these figures for tons of fuel consumed, getting his data from reports from fuel stations. A similar practice is followed on the Denver & Rio Grande.

On the Cleveland, Cincinnati, Chicago & St. Louis the figures for fuel consumed are compiled in the superintendent

REPORT OF FREIGHT CARS HANDLED IN				TOTAL NO. CARS HANDLED THIS TRIP				SHEET NO.								
Train	Direction	Division	Engine	From	To	Miles	Engineman	Fireman								
Left	At	M.	191													
Arrived	At	M.	191													
Caboose	From	To	Conductor													
Caboose	From	To	Brakemen													
CAR INITIALS	CAR NUMBER	Day of Month	STATION NUMBER		KIND	CAR MILES			WEIGHT TONS		CAR CONTENTS	FINAL DESTINATION	REMARKS OR SEALS			
			Taken at	Left at		Loaded	Empty	Net	Tare	Gross			E. or N. Side	W. or S. Side	End or Top	
○																
1																1
○																

Broad Sheet of Conductor's Fuel Report

The figures for form OS-2 on most of the roads are obtained from daily reports of train and locomotive mileage.

Form OS-3

Form OS-3 is a report of locomotive performance which includes mileage made and tons of coal consumed. The figures for mileage are obtained from the same sources as similar figures for OS-1 and OS-2, but the practice in regard to tons of coal consumed varies quite widely. For instance, on the Southern Pacific these figures are obtained from a report of fuel delivered to locomotives, furnished monthly to the accounting department by keepers of fuel stations. For locomotives engaged in two or more classes of service during the month the segregation is made on the basis of construc-

of motive power's office from reports received from the fuel department, and copies are sent direct from the superintendent of motive power to the operating officers. On the Atchison, Topeka & Santa Fe fuel consumption of locomotives is compiled by the stores department from daily reports of fuel issued to locomotives. On the Chicago, Rock Island & Pacific, tons of coal consumed is computed for each class of service separately by operating divisions by the auditor of disbursements directly from fuel tickets required from each coal chute or where coal is delivered to locomotives.

Form OS-4

In the preparation of the figures for OS-4, which is a distribution of locomotive hours, there is an opportunity and a

UNITED STATES RAILROAD ADMINISTRATION														FORM 1914-A
W. G. MCADOO, DIRECTOR GENERAL OF RAILROADS														
DELAWARE AND HUDSON RAILROAD														
DAILY REPORT OF COMPANY FUEL ISSUED TO LOCOMOTIVES AT _____ STATION, DATE _____ 191_____														
ENGINE NUMBER	POUNDS COAL			TIME ENGINE COALED	ENGINE NUMBER	POUNDS COAL			TIME ENGINE COALED	ENGINE NUMBER	POUNDS COAL			TIME ENGINE COALED
	HARD	SOFT	TOTAL			HARD	SOFT	TOTAL			HARD	SOFT	TOTAL	
					FORWARD					FORWARD				

Daily Report of Fuel Issued to Locomotives

tive mileage, determined by converting actual mileage in the different classes to an equivalent of one class. The ratio of fuel consumed per thousand miles by locomotive classes for the preceding 12 months are prepared by accumulating the mileage and fuel consumption of individual locomotives of the various types when engaged in one class of service.

On the Pere Marquette the tons of coal consumed are obtained from monthly coal reports compiled from the engine-men's coal checks. On the Lehigh Valley the information is obtained from a daily report from each fuel station foreman, which shows the coal issued to individual locomotives in each class of service and divides this coal into various grades of

temptation for great inaccuracy. On the Rock Island, where great care is being taken to obtain the fullest possible benefits from the new operating statistics forms, a new form of report has been worked out by which the full time of every locomotive owned and operated will be shown each day and recapitulated at the end of each month. On the Denver & Rio Grande this OS-4 report is prepared from reports received by the superintendent of motive power from all roundhouse points and terminals. On the Great Northern the original data used are the time slips and train despatchers' reports, which are checked against and used in conjunction with the reports furnished by the mechanical department, showing

the number of hours locomotives are awaiting repairs, undergoing repairs and are stored or awaiting sale.

On the Missouri Pacific this OS-4 report is compiled in the chief dispatcher's office from train sheets, and this is balanced against the reports furnished by enginehouse forces and a complete accounting for the entire 24 hours is required for each locomotive. On the Erie the report is prepared by the general mechanical superintendent. On the Pere Marquette the information for OS-4 is obtained from special reports rendered by each roundhouse foreman. Where the

covers time of locomotives in hands of or awaiting orders of mechanical department for repairs, when held more than 24 hours on that account; locomotives in shops or enginehouse undergoing repairs, when held more than 24 hours on that account; and locomotives stored or awaiting sale, including vacated or condemned locomotives. This information is then assembled and reported by each division to the accounting department on Form OS-4, where reports for the ten divisions are consolidated.

On the Delaware & Hudson the preparation of the figures

1 3 5 7 9 11 MONTH												Engine No.	TON MILEAGE				CAR MILEAGE		Train Mileage	TRAIN HOURS		DELAWARE FREIGHT LOCOMOTIVE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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Holerith Cards of the Delaware & Hudson

yard office is located near the roundhouse, the report is rendered jointly by the roundhouse foreman and the yard master.

On the Southern Pacific form OS-4 is compiled for each of the ten operating divisions, report for each division being made in the office of the division superintendent. A separate sheet is used to assemble the time of each locomotive, a separate line on the report being used for each day of the month. Columns are provided for class of service, time on road, terminal delay, time in enginehouse (separately for mechanical and transportation departments), awaiting repairs and undergoing repairs, with separate column for time off

for OS-4 is carried out through the medium of chronological record of distribution of locomotive hours for each individual locomotive, Exhibit "C." The road time is obtained from the engineers' time slips, from which they receive their pay, these being available (loaned to Bureau of Operating Statistics by Auditor's office) currently through the month. The terminal and in-enginehouse time is derived from the daily record of movement of engines at terminals, which is received daily from each engine terminal. Stored and unserviceable time is derived from daily advices from the superintendent of motive power. The coal consumed is derived from the daily report made by each coaling station and for-

ENGINE-TRAIN AND CAR MILEAGE														FREIGHT									
Date	No. Trains	Direction	Class	Engine Number	Between Stations				Gross-Ton Miles		Car Miles				Capacity Ton Miles				Engineer				
					Low No.		High No.				Loaded		Empty										
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Holerith Card of the Minneapolis, St. Paul & Sault Ste. Marie

division, thus allowing for a balance of 24 hours for each locomotive. Information for the first two items is obtained from the dispatchers' sheets. Terminal delay is taken from dispatchers' sheets used in conjunction with the turning power record, described below. The other information is taken from special forms made at each enginehouse or point of layover and termed, turning power record and locomotive shop hours for OS-4. The turning power record covers time of each locomotive handled in the enginehouse in one day, showing time in, time out, hours awaiting or undergoing repairs, and awaiting service. Report of locomotive shop hours

warded daily. It will be noted that the form for distribution of locomotive hours provides space for inserting, by symbols, the division and direction over which engines are moving, as well as terminals at which they are held. Space is also provided for entering through the medium of a symbol record the principal causes of terminal delay.

The particular advantage seen in the chronological record of the individual locomotive is that the failure of any engine's daily hours, including road service and at terminals, to total 24 indicates an error or the non-receipt of some essential report, and a blank space in the day's record points the way

to its correction. The necessary additions and cross footings are made through the medium of comptometers, the two right-hand columns of which are adjusted to "break" at 60, thereby adding hours and minutes at one operation, which is a time saving device of primary importance. The practical value of these reports is derived from daily tabulation of stand-by time at terminals and unused time which elapses (in the case of pooled locomotives) between "ready for service" and

Form OS-5

The figures for form OS-5 are in general obtained from the same sources as the figures for OS-1 and OS-2. For instance, on the Rock Island the detailed information for freight car performance called for on form OS-5 is secured as follows: The number of cars owned is furnished the car accountant's office monthly by the general mechanical superintendent and is taken from the historical records maintained

ENGINE-TRAIN AND CAR MILEAGE																				PASSENGER																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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Eng. Index	Sub-Div.	Class of Power	DATE		Engine No.	FROM		ENGINE MILES	TERMINAL FROM TERMINAL TO		Sub-Div. Code	Class of Power	
			TRAIN HRS.	Min.		Net Ton Miles	Rating Ton Miles		Loaded	Empty		Loaded	Empty
0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9	9	9	9	9

Hollerith Cards of the Rock Island

"marked"; this latter figure acting as a barometer in connection with the storage of locomotives. The complete reports are made monthly by operating districts, copies being placed in the hands of both general and division officers of the transportation department and general officers of the mechanical department.

in the office. Serviceable cars on line daily is determined by the car accountant from an inventory taken from his reports on the first day of each month, with a daily debit and credit adjustment figured from the summary of all interchanges currently received. The home and foreign cars in or awaiting shops daily is taken from daily telegraphic car

reports accumulated in each train despatcher's office and forwarded to the superintendent of transportation's office, who furnishes this data daily by divisions to car accountant. The net ton miles and total car miles shown on this report are figures direct from conductors' freight wheel reports in car accountant's office.

One fundamental difference between different roads, in compiling operating statistics, is the use or non-use of the Hollerith machine. The Chicago, Rock Island & Pacific appears to have tackled this question of the use of this machine for these operating statistics in a common sense and fearless way. It will be noticed that the figures are put on a Hollerith card in pencil and then punched on the card by Hollerith operators, and the holes are punched where necessary through the written-on figures.

Nearly all of the roads use some kind of mechanical devices for checking totals and for performing divisions and multiplications. The comptometer is the most commonly used machine, but some roads are using Burroughs non-listing machines in its place and others are using the Monroe calculating machine, the Millionaire, the Brunsviga and the Midget calculating machines.

Department of Transportation Proposed by Railway Executives

A REVISED PLAN of railroad regulation proposed by the Association of Railway Executives was outlined by Alfred P. Thom, counsel for the association, in an address at the meeting of the American Short Line Railroad Association on June 4. The plan provides for the creation of a department of transportation, consisting of three men appointed by the President, who would be charged with the duty of determining the public policy as to the requirements of the public in the way of transportation facilities and service and the financial requirements of the carriers necessary to meet the public demand, and would present the situation to the rate-making tribunal as the representative of the public. This plan, Mr. Thom said, has been adopted by the railway executives as a substitute for the proposed appointment of a secretary of transportation as a cabinet officer, which is regarded as unwise because of the danger of too much political influence. It would remove the settlement of railroad questions from the domain of controversies between the railroads on one side and the public on the other and would also promote a feeling of confidence among investors. The department, he said, should consist of the best men in the country, to be paid salaries of, say, \$25,000 a year, and to be appointed for long terms of office, except that he suggested that the first appointees be selected for terms of two, three and four years, respectively.

It is proposed that the country be divided into rate-making districts and that the department should study the amount of operating revenues the carriers in each district should have to pay: (1) all expenses for operation and maintenance, including labor; (2) a fair return on the value of the property devoted to the public service, and (3) a surplus sufficient to afford a basis of credit and attract the investment of new capital; this amount to be certified to the commission, which would be required to accept it unless good cause were shown to the contrary, as a basis for its rate decisions.

The plan also provides for the creation of regional commissions, consisting of one representative from each state, to decide local questions. The railway executives also propose a permissive system of consolidation, under federal authority, and the supervision of security issues by the Interstate Commerce Commission, while the police powers and taxing powers of the several states would not be interfered with.

"The railway executives have arrived at very definite conclusions as to the solution of the railroad problem," Mr. Thom said. "We regard it primarily as a problem of finances. We have every other element needed except the assurance of the financial strength necessary to make the railroad service adequate to the public needs. The government can no longer regulate the railroads with reference mainly to the restriction of their charges; it must look to what is necessary to provide adequate service."

He opposed the plan of a guaranteed return as leading inevitably to government ownership, because, he said, the government is not going to take the responsibility of a guarantee without taking control. He also opposed the proposal for what he termed "a guarantee out of the pockets of the shippers," in other words, a rule that rates be made sufficient to provide a return of 6 or 6½ per cent on the investment, because the fixed percentage would not be adjustable to changing economic conditions. The percentage, he said, would have to be fixed with relation to the economic conditions of today and if these were so changed as to leave it too high, the reaction would probably sweep private ownership off the earth. Also, he said that no matter where the percentage starts, when Congress gets through with it, it will not be so high that Congressmen will not feel easy in going home to defend it, and any percentage they would feel ready to defend would be too low for the railroads to live on. Moreover, the exact percentage could be argued but once, before Congress, and the rate once determined would remain until changed by another act of Congress.

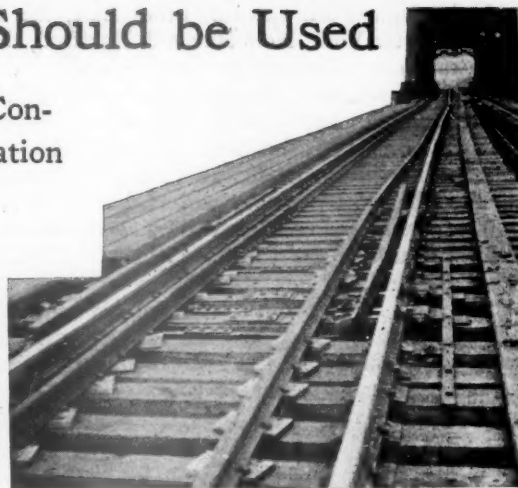
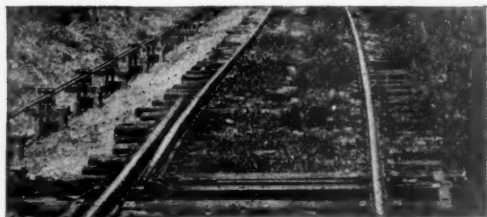
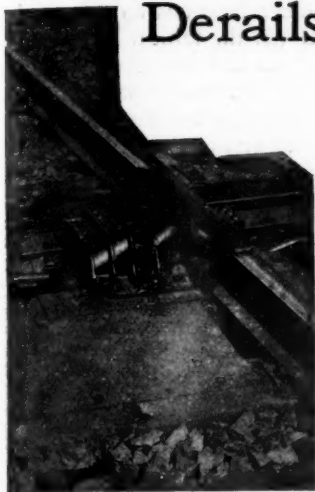
"The principle we adopt must be adjustable," he said. "Regulating bodies heretofore have gone on the principle of making rates as low as they could. Can we expect a body that has spent its official life in trying to keep down rates to have the confidence of the investing public? Regulating bodies are in an exposed condition, always subject to political pressure which they must resist before taking any action toward advancing rates. Something must be done to remove the settlement of this question from the controversial atmosphere of litigation in which the selfish interests of the railroads appear to be arrayed against the public. We cannot win in a controversy with the public. We must have a public body to determine as a public question the needs of the public for service and the amount of money which will be provided for those needs and then become a party before the rate-making body as the representative of the public and not of either side."

Mr. Thom declared also that provision must be made for the transition of the railroads back to private management. This cannot be done, he said, without some preparation, because the railroads are not in the condition in which the government took them over. At that time operating expenses were consuming 70 to 72 cents out of every dollar of railroad earnings, while the government has found it necessary to add to the expenses, as one item, the increased labor cost of approximately \$1,000,000,000 a year until in recent months operating expenses have taken 95 to 97 cents out of every dollar of earnings.

"The government is not in a position to return today what it took over," Mr. Thom said. "The law ought to provide a definite date for the return to private management, and there should be an inquiry by some governmental authority as to what should be done to restore the conditions which the government has disturbed, and especially the proper relationship between revenues and expenses. The government has no right to restore the railroads in a bankrupt condition. We therefore propose that until the Interstate Commerce Commission or other government authority can establish an earning capacity in keeping with the expense account, the present guarantee of compensation should, in morals and in right, be continued."

Derails and Where They Should be Used

A Study of the Types Used, the Conditions Governing Their Application and the Results Obtained.



Three Types of Derails

DERAILED ARE EMPLOYED so universally and are so common a part of the present roadway construction that but a passing thought is ordinarily given to their use. Railway men are familiar with the common practice on their own lines and seldom realize the wide variance in the use of this device on other roads. For instance, some roads like the New York Central, Lines East, make it a practice to install derails on passing tracks, while others like the Long Island are abandoning them for this purpose. The Illinois Central and the Chicago, Rock Island & Pacific make it a practice to install derails on all tracks that lead out to the main line on which cars may stand, while the Chicago, Milwaukee & St. Paul and the Chicago, Burlington & Quincy use them in such tracks only where adverse grades or other conditions warrant. On some lines it is the practice to place derails in turntable leads, while many other roads do not require protection at such points but may install derails at special locations such as at the foot of coal chute inclines, on breaker tracks or on tracks running through shop buildings for the protection of the buildings.

It is the general practice on the Lehigh Valley to use pipe-connected derails, while the Long Island prefers the hand throw type. Some roads use the pipe-connected type in automatic signal territory only, while others use the hand throw type irrespective of signals. Again some lines like the Philadelphia & Reading connect up all derails with the signal circuits through switch circuit controllers whether the derails are pipe connected or hand thrown, while other roads like the Delaware & Hudson use the switch circuit controller on hand throw derails, but not on the pipe connected type in automatic signal territory.

Again the tendency toward the more general use of derails varies greatly. The Rock Island, for example, is extending their use, while the Chicago Great Western has recently removed them from passing tracks. Practice again varies regarding the use of the split point or the block type of derail. Some roads use the split point in special cases only, others like the Northern Pacific make the split point type the standard, while the general tendency of many other roads is toward the use of the block derail.

As indicated above, the frequency and the conditions under which derails are used vary greatly. For this reason the *Railway Age* has secured and tabulated data covering the practices on 48 representative railroads in all parts of the United States and Canada in order to ascertain the conditions governing their installation at other than interlocking plants. In this investigation the following questions were asked:

(1) Are derails placed on all passing and other tracks

connecting with main tracks or on only those with particularly adverse conditions as to grade, vision, etc., or are they omitted from all such tracks? Is any distinction made between passing and industry tracks in this connection?

(2) Are derails commonly installed in tracks leading to turntables or at other special locations apart from the main track?

(3) Is the split point or block derail used?

(4) To what extent is the use of derails modified in automatic signal territory? Are derails in automatic signal territory equipped with switch circuit controllers?

(5) To what extent are the derails pipe-connected to the switch stand or hand thrown?

(6) Is the tendency toward the more general use of the derail, and if so under what conditions?

(7) Have any recent instances occurred where the use of derails has demonstrated the worth of their application?

The information received was tabulated in the table accompanying this article, but in studying this table it is to be understood that it indicates the general practice of individual roads, numerous exceptions to which will be found in the discussion following.

Sixteen of the 48 roads replying to the circular of inquiry install derails on both passing and industry tracks; 13 install them only on industry tracks, while 19 install them only at locations where particularly adverse conditions as to grade, vision, etc., prevail.

Installation on Both Passing and Industry Tracks

In considering the installation of derails on both passing and industry tracks many different practices again exist. Some roads place derails on both classes of tracks irrespective of the conditions existing, while others make exceptions to this rule and use derails only where adverse conditions are present. Again derails may be omitted at certain points on lines on which the general practice is to equip all sidings with derails because grade conditions may not warrant their use, while still other roads will protect all main line turnouts and omit this protection on branch lines where traffic is light. Derails are omitted on passing tracks by some roads because these tracks are only used for the purpose indicated and it is felt that, with a train in the clear, there is no need of derails as the cars are under the control of the engineman. However, on other lines the management feels that it is as important to place derails on these tracks as on industry and business tracks because the derail definitely marks the clearance point and forces obedience in observing it, thus preventing a train stopping at a point of limited clearance.

Many roads make it a practice to install derails on both passing and industry tracks, including the Pennsylvania Rail-

road, the New York Central, Lines East, the Baltimore & Ohio, the New York, New Haven & Hartford, the Delaware, Lackawanna & Western, the Lehigh Valley, the Erie, the Cleveland, Cincinnati, Chicago & St. Louis and the Philadelphia & Reading. Among other roads reporting the installation of derrails on part or all of their passing tracks are the Boston & Maine, the Louisville & Nashville, the Chesapeake & Ohio and the Chicago Great Western, while still other lines place them on passing tracks under certain conditions only. Typical of such roads are the Chicago, Rock Island & Pacific, the Illinois Central, the Norfolk & Western, the Nashville, Chattanooga & St. Louis and the Seaboard Air Line.

It is interesting to note some of the variations existing among roads that make it a general practice to install derrails on both passing and industry tracks. In this connection the Pennsylvania Railroad installs either a split switch derail or a

Lackawanna & Western, but all other locations on this road are equipped with them. Road G (in the table), located in the central part of the country, makes it a practice to place derrails on all sidings connected with the main track. On this road derrails derailing in one direction only are used on passing sidings and yard leads, while at stations and industrial sidings those derailing in both directions are installed and it has been found that in some instances that trainmen have pushed cars in over the derrails on such sidings with the result that they have become grooved and fail to derail cars running out over them. The only exception in the use of derrails made by the Cleveland, Cincinnati, Chicago & St. Louis is on some branch lines, where the traffic is light; in such territories the sidings are not equipped with them.

While the Boston & Maine does not place derrails on all passing or other tracks connected with the main track a large

TABLE SHOWING THE GENERAL APPLICATION OF DERRAILS ON VARIOUS RAILROADS

ROAD	Derrails Used on Tracks Leading to Main Line				How Operated		Used in Special Locations		Type Used		Use in Automatic Signal Territory		Is Tendency Towards More General Use	Has Their Value Been Demonstrated
	Passing	Industry	Both Passing and Industry	Only Where Grade or Other Conditions Warrant.	Pipe Connected	Hand Thrown	Turntable Leads	Other Special Locations	Split Point	Block	Pipe-connected Without Switch Circuit Controllers	Controllers Used on Hand Throw Derrails		
A.T.&S.P.				Yes	Yes	Yes	No	No		Yes	Yes	Yes	Yes	No
A.C.S.		Yes	Yes		Yes	Yes	No			Yes	Yes	Yes(?)	Yes	Yes
B.&O.					Yes	Yes	No			Yes	Yes(a)	Yes	Yes	Yes
B.&M.	Partly	All New			Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes
C. of G.		Yes			Yes	Yes	No	No		Yes	Yes	Yes	No	Yes
C.&O.	Yes			Yes	Yes	Yes	No	No	Yes	Yes	Yes(a)	Yes	Yes	Yes
C.&A.				Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	No	Yes
"A"			Yes		Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
C.&D.&Q.				Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
C.&G.W.	Few			Yes	Yes	Yes	No	No	Some	Yes	No	No	No	No
C.&N.&St.P.				Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes
C.&R.I.&P.		Yes			Yes	Yes	Some	Some	Some	Yes	Yes	Yes	Yes	Yes
C.&C.&St.L.			Yes		Yes	Yes	No	No	Yes	Yes	Yes	Yes	No	Yes
C.&S.				Yes	Yes	Yes	Few	Few	Some	Yes	Yes	Yes	Yes	Yes
D.&H.				Yes	Yes	Yes	No	Few	Yes	Yes	Yes	Yes	Yes	Yes
D.&A.W.			Yes		Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
D.&M.G.				Yes	Yes	Yes	No	Few	Yes	Yes	Yes	Yes	Yes	Yes
Erie			Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes(a)	Yes	Yes	Yes
I.C.		Yes			Few	Yes	Yes	Yes	Some	Yes	Yes	Yes	Yes	Yes
"B"	Few	Yes			No	Yes	No	Few	Yes	Yes	Yes	Yes	Yes	Yes
L.V.		Yes	Yes		Yes	Yes	Few	Few	Few	Yes	Yes	Yes	Yes	Yes
L.I.		Yes			Yes	Yes	No	No	Yes	Yes	Yes(a)	Yes	No	Yes
L.&A.S.L.				Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes
L.&N.	Yes	Yes			Yes	Yes	No	No	Few	Yes	Yes	Yes	No	Yes
"D"				Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No
M.&St.L.		Yes			Yes	Yes	No	Yes	Some	Yes	Yes	Yes	Yes	Yes
M.&St.P.&S.S.M.				Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No
M.&K.&T.		Yes			Yes	Yes	Yes	Some	Few	Yes	Yes	Yes	Yes	Yes
"E"		Yes			Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes
M.&N.		Yes			Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes
M.&C.&St.L.				Yes	Yes	Yes	Seldom	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N.Y.C. (East)			Yes		Yes	Few	No	No	Some	Yes	Yes	Yes	Yes	Yes
N.Y.C. & St.L.				Yes	Some	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes
N.Y.C. & St.L. & N.H.				Yes	Yes	Few	No	Few	Few	Yes	Yes	Yes	Yes	Yes
N.Y.N.H. & H.		Yes			Yes	Yes	No	No	Few	Yes	Yes(a)	Yes	No	Yes
"F"				Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No
P.&D.				Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	No	Yes
P.&R.		Yes			Yes	Yes	No	No	Yes	Yes	Yes	Yes	No	Yes
P.&N.		Yes		Yes	Yes	Yes	No	No	Yes	Yes	Yes(a)	Yes	No	Yes
P.&H.			Yes		Yes	Yes	No	No	Yes	Yes	Yes(a)	Yes	No	Yes
"H"				Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	No	Yes
S.&A.L.		Yes			Yes	Yes	No	No	Yes	Yes	Yes	Yes	No	Yes
S.&P.				Yes	Few	Yes	No	No	Yes	Yes	Yes	Yes	No	Yes
S.&A. (Lines)				Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	No	Yes
U.S.		Yes			Few	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No
C.&P.R.				Yes	Few	Yes	No	Few		Yes	Yes	No	No	Yes

* General Practice. † In Automatic Signal Territory.

In-Special Cases. (a) Equipped with Circuit Controllers.

block derail in combination with the split point on all exterior passing sidings and on all other tracks connected with the main track where it is possible under any circumstances for speeds to exceed 12 miles an hour; when the speed cannot exceed this rate the block derail is used with the guide rail and if the sidings are of infrequent use the hand throw derail is used either independently or with the guide rail. It is not the general practice to equip interior passing sidings with derrails. Apart from this no distinction is made on this line between passing sidings and industrial or other tracks connected directly with the main track. The only exception made to the installation of derrails on all tracks by the New York Central, Lines East, is their use on passing sidings located between main tracks and even these passing sidings are sometimes provided with derrails when they are located on a grade which may allow a car to move toward the main track. The upper ends of the passing sidings located on heavy grades are not protected by derrails on the Delaware,

proportion of these tracks are so equipped and the number is gradually being increased. At the present time the Chesapeake & Ohio has installed derrails on approximately 90 per cent of its passing tracks and it is the practice to equip such tracks with this device.

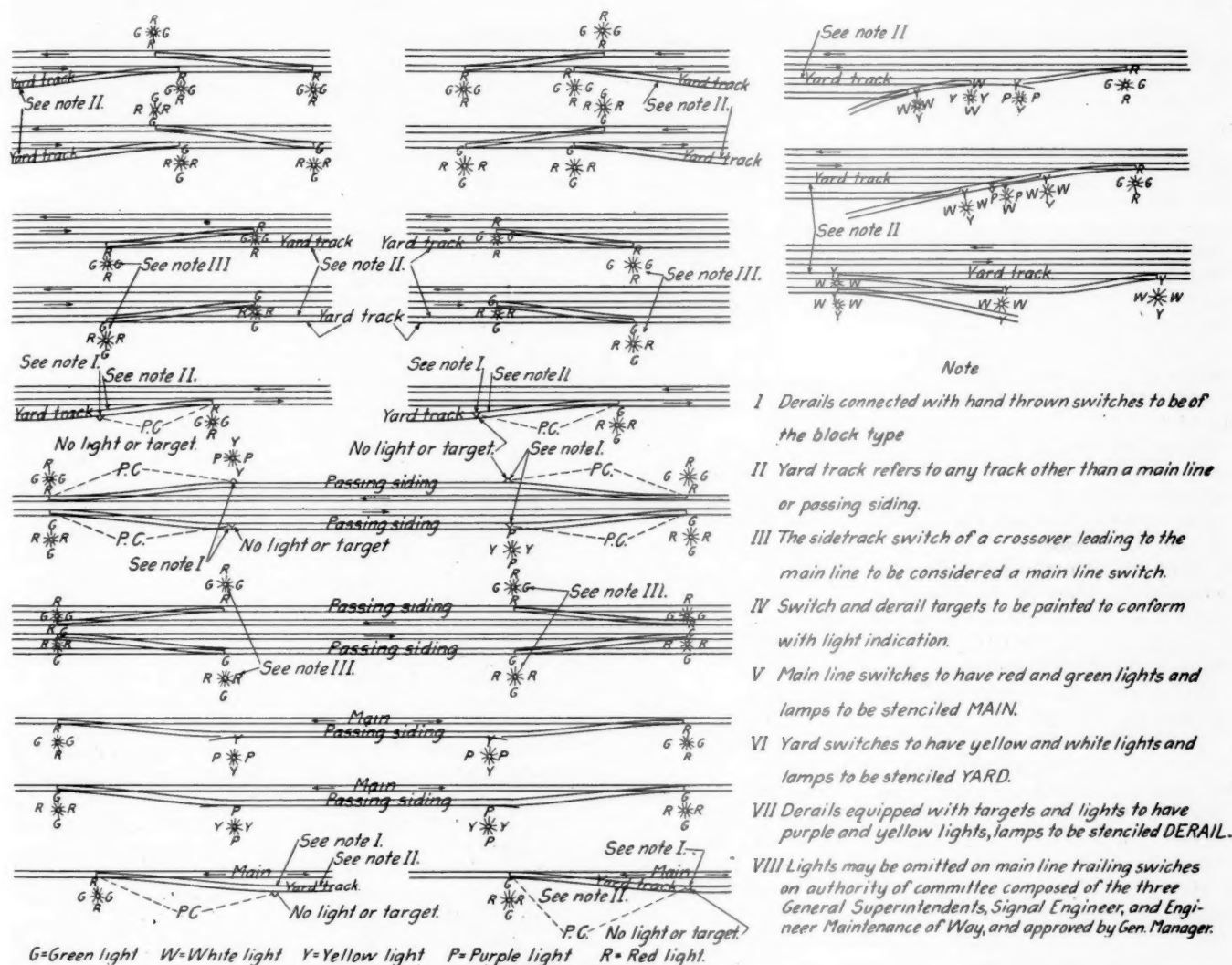
The practice of the Philadelphia & Reading is to place derrails on all tracks leading to the main track except on the end of passing sidings in automatic signal territory that are not interlocked, while the Louisville & Nashville places derrails on passing tracks in automatic signal territory only. Road A (in the table), located in the central part of the United States, makes it a practice to place derrails on passing sidings in connection with the installation of new automatic signals.

The Rock Island, the Illinois Central, the Norfolk & Western, the Nashville, Chattanooga & St. Louis and the Seaboard Air Line place derrails on passing tracks where they are used to set out cars at the station or where adverse conditions may

exist. The Lehigh Valley places derails at the fouling points on all passing sidings and industrial tracks where there may be danger of cars dropping and fouling other tracks.

The Long Island no longer requires the use of derails on passing sidings and is abandoning them for this purpose, while the Missouri, Kansas & Texas and the Minneapolis & St. Louis do not make it a practice to install derails on such tracks. The Chicago Great Western has a few derails on passing tracks, but this is not the general practice, and recently a number of derails have been removed from passing tracks because with only a few such places so equipped there was a

Western, the Lehigh Valley, the Long Island, the Boston & Maine, the Louisville & Nashville, the Norfolk & Western, the Missouri, Kansas & Texas, the Seaboard Air Line and the Minneapolis & St. Louis. It is the practice of the Lackawanna to install derails on all industrial sidings, while the Atlantic Coast Line occasionally omits their installation where the grade of the industry track falls from the main line. On the Boston & Maine it is now the standard practice to use derails on all new industry tracks, and the same practice applies on the Nashville, Chattanooga & St. Louis. While the entire road is not equipped at the present time this work is being



The Use of Derails Under Different Conditions on the New York, New Haven & Hartford

liability of oversight on the part of trainmen and this condition caused more frequent derailments than if the derails were entirely dispensed with.

The Use of Derails on Industry Tracks

The conditions governing the installation of derails on industry tracks vary considerably on the different roads using them for protection at such points. Some lines make it a practice to place derails on all industrial tracks, irrespective of grade or speed conditions, while others omit them at points where the grade of the industry track falls from the main line. Still other lines place derails only on tracks where there is a possibility of cars being blown or pinched out to foul the main track.

Among the roads installing derails on station, industry, business and private tracks are the Delaware, Lackawanna &

done gradually and the places where derails are needed the worst are being equipped first. Road G, located in the central part of the country, installs a derail, derailing in both directions on station and industrial sidings.

The practice on the Union Pacific is to place derails on all tracks where cars are set out if these tracks are connected with the main line or if they are branch tracks, derails are then placed somewhere between such tracks and the main line for its protection. Other lines make it a practice to place derails at the fouling points on all industrial tracks where grade conditions warrant and on all tracks where cars are left standing if there is the slightest possibility of their being blown out or pinched out where they might foul the main line. Some roads following this practice are the Lehigh Valley, the Rock Island, the Illinois Central and the Mobile & Ohio.

The use of derails on the Central of Georgia is in line with

the following maintenance of way rule: "Main track must be protected by approved derailing devices so located that derailed cars will clear the main line on all tracks leading therefrom excepting passing sidings. They must be set and locked for derailment at all times except when in use."

The Use of Derails Under Special Conditions

The managements of some roads feel that proper protection is provided, not by the universal application of derails, but by their location at places where grade or other adverse conditions warrant. For example, on some roads derails are placed on sidings on which the grade descends toward the main line, while others place them at points where high winds exist which may blow cars out of the sidings. Again some states have recognized the necessity of derail installations under certain conditions and have passed legislation accordingly. In such cases the practice on the various roads in the states is more or less uniform. In Texas the following requirements are prescribed by law: "It shall be the duty of every railway corporation operating any line of railway in the state of Texas within six months after the passing of this act to place good and safe derailing switches on all of its sidings connecting with the main line of such railways and upon which sidings cars are left standing; provided, that no derailing switches shall be required where the sidings connect with the main line on an upgrade in the direction of the main line of one-half of one per cent or over; provided, further, that no derailing switches shall be required on inside tracks at terminal points where regular switching crews are employed."

Among the railroads installing derails on tracks where grade or other conditions warrant may be mentioned the Atchison, Topeka & Santa Fe, the Northern Pacific, the Union Pacific, the Delaware & Hudson, the Southern Pacific, the Chicago, Burlington & Quincy, the Chicago, Milwaukee & St. Paul, the Canadian Pacific, the Chicago & Alton, the Chesapeake & Ohio, the Pere Marquette, the Minneapolis, St. Paul & Sault Ste. Marie, the New York, Chicago & St. Louis, the Los Angeles & Salt Lake, the Chicago Great Western, the Denver & Rio Grande and the Colorado & Southern.

The practice on the Atchison, Topeka & Santa Fe, the Southern Pacific, Atlantic System and the Canadian Pacific is to install derails according to the grade conditions; the Santa Fe installs them at the ends of all tracks (excepting the passing tracks and wyes) where the grade ascending toward the main line is less than 0.5 per cent, while the Southern Pacific Lines install them on all tracks connecting with the main line except yard or other tracks on which switch engines are used, provided such tracks are not on a descending grade of 0.5 per cent or over. The Canadian Pacific protects the main track by derails where a siding may be used for storing cars having a gradient of 0.2 per cent or over toward the main line so located that there is danger of a runaway car getting either directly or through an intervening siding to the main track. These derails are placed on tracks coming off the main track or any other one leading to it.

The Northern Pacific places derails only on these tracks where particularly adverse conditions exist as to grade, vision, etc. Ordinarily derails are not placed on passing tracks unless they are also at times used as storage tracks. They are placed on all industry tracks where the grade toward the main line is such that a car could move when the brakes are off. Through the prairie country, which is subject to very high winds, this road places derails on all tracks where there is danger of cars being blown out on the main line, the entire matter being left to a considerable extent to the judgment of local officers. It is not the practice of the Southern Pacific to place derails on passing tracks and other tracks connected with the main line, but they are installed on such tracks wherever these are on a grade approaching a main line

or at points in level territory where unusual conditions such as high winds prevail. It is also its practice to put in derails on short spur tracks where cars that are set out for loading ordinarily come close to clearance points to prevent cars moved by the shipper from fouling the main track. The Chicago, Milwaukee & St. Paul makes it a point to install derails generally on main line turnouts only and restricts their use to points where grades are such that cars could easily run out on the main line or be blown out by heavy winds.

Installation of Derails at Turntables,

Drawbridges and Other Locations

The general tendency of the railroads is not to install derails in turntable leads or at other special locations in yards or points not connected directly with the main line. However, in this respect the practice varies considerably on different roads, some installing derails in turntable leads, others at the foot of tracks leading from coal chutes, at box car loaders, around breaker tracks or for the protection of shop buildings.

Among the roads making it a general practice to install derails on tracks leading to turntables and like places involving risks are the Illinois Central, the Erie and the Missouri, Kansas & Texas. Other roads using them to a limited extent at such locations include the Lehigh Valley, the Chicago, Rock Island & Pacific, the Boston & Maine, the Baltimore & Ohio, and the Colorado & Southern. The Lehigh Valley, the Rock Island and the Boston & Maine make it a practice to install derails on tracks leading to turntables and other special locations where the grade is unfavorable, where there is a possibility of engines running out on the main track or at points where accidents have occurred or are liable to happen.

The Baltimore & Ohio and the Colorado & Southern have installed derails in a few special locations on tracks leading to turntables and at other points.

The New York, New Haven & Hartford makes it a practice to place derails at drawbridges. At these locations they are placed in tracks both with and against the direction of traffic. It is the practice of the Chicago, Burlington & Quincy to also use derails on tracks approaching drawbridges.

Some roads make it a practice to protect box car loaders, coal chutes and repair tracks. The only special locations apart from the main track on which derails are used on the Delaware & Hudson are at box car loaders and around some of the breaker tracks, but this is indirectly a protection to the main track. A road in the central part of the country, road A in the table, installs derails on tracks leading to elevated coal chutes whether these tracks are connected into the main track or otherwise, but it is not the regular practice to treat other special locations in a similar manner. The Minneapolis & St. Louis uses derails to protect shop buildings beyond car repair tracks where these tracks run through the buildings, and a road in the Southwest, road B in the table, uses derails on repair tracks.

Among the roads installing derails at special locations apart from the main track such as industrial tracks or similar spurs which are located on bad grades or at points where cars are liable to foul the running tracks, may be mentioned the New York, New Haven & Hartford, the Delaware, Lackawanna & Western, the Southern Pacific Lines, the Philadelphia & Reading and the Nashville, Chattanooga & St. Louis.

In general, derails are not installed on tracks leading to turntables but in a number of cases they are used to protect other special locations on the Delaware, Lackawanna & Western, the Southern Pacific, the Delaware & Hudson, the Chicago, Burlington & Quincy and the Canadian Pacific Railways.

The Use of Split Point and Block Derails

Three classes of derails are used by the railroads replying to the circular. These types are the split point, the block and the lifting rail derail. The split point derail is used at places where high speed conditions prevail or on curves of a certain degree and at points where there must be no possibility of a train or car getting by. One objection to the use of this type is that a break is made in the track. The lifting rail derail is another type of high speed derail which can be installed without breaking the track, but it is used mostly within the limits of interlocking plants. The block derail is one that can be applied at almost any location without cutting the track and can be used advantageously in a large number of places where speed or curve conditions are not too severe, or when not prohibited by law. Some roads report the split point as standard and others the block type, but practically all use both kinds, depending on conditions such as their location on a curve, their use on important passing tracks in high speed territory, the speed of trains, and where the type of derail is specified by law. In some cases the type of derail used on a siding is determined by whether it is a permanent or a temporary one.

Some of the roads make it a practice to use the split point type on main line tracks and on all tracks immediately connected with the main line and where high speed movements occur. Among these roads may be mentioned the Santa Fe, the Lackawanna, the New York, New Haven & Hartford, and the Louisville & Nashville. On these lines the block type derail is used for other locations. The Norfolk & Western uses the block derail except at places where it is prohibited by law, in which case the split point type is used, while the Los Angeles & Salt Lake uses a split point derail in locations that are particularly hazardous, while the block derail is used at other places. A road in the Southwest, road *H* in the table, uses a block derail except at the foot of coal chute inclines, when the split point derail is installed.

The Baltimore & Ohio uses a derail of the lifting rail type on main tracks and at the outlet of important passing tracks in high speed territory, but the block derail is used elsewhere. In some cases the Louisville & Nashville uses the lifting rail type derail for locations in high speed territory, while the Burlington uses this type on the main track, but the block derail is being used for all new installations and replacements for side tracks.

The New York Central, Lines East, the Southern Pacific and a road in the central part of the country, road *A* in the table, make it a practice to use the split point derail on the inside of curves or where grade conditions may warrant.

The New York Central, Lines East, uses the split point on the inside of curves where they are sharper than one degree, while road *A* does not specify any certain curvature for its use at such locations. On the Southern Pacific the block derail is used only where grades are less than one per cent; at points where grades are greater, the split point type is employed.

The standard derail on the Northern Pacific is the split point, but the block derail is used in special locations. The split point derail was adopted as standard because the conditions are a little different from those existing on roads in other parts of the country, as in the timber regions along the Northern Pacific a great many temporary tracks are built and remain in for a year or two. After they have served their purpose they are then removed. This road found difficulty in matching up material recovered from the derails used in the temporary tracks, and many times the recovered material went to the scrap pile because of some missing parts. As these tracks are frequently needed in a hurry and many delays were experienced in getting and installing the derails, it was felt to be better practice to use the split point, as this

is always available. Under other circumstances the block derail would likely have been favored as a standard. The practice of a road in the Southwest, road *B* in the table, is to use the split point derail with the low pony switch stand to operate it, similar to the one used for back track switches. The standard practices and the types of derails used by other roads are as listed in the table.

Derails in Automatic Signal Territory

Considerable variation exists in the application of derails to sidings connected to the main line in automatic signal territory. Some roads make it a practice to use switch circuit controllers connected up with the derails whether they are pipe connected or hand thrown; other roads use the circuit controller only in connection with hand thrown derails, while still others make it a practice to use pipe-connected derails in such territory without connecting them up to the signal system. The reports received indicated that 14 railroads use both pipe connected and hand thrown derails in automatic signal territory, 7 roads use pipe-connected derails, and 16 use hand thrown, while 11 report no automatic signal territory.

Where a pipe-connected derail is used in automatic signal territory, some roads do not make it a practice to use the circuit controller operated by the derail, inasmuch as the signal system is controlled through one located at the main line switch which operates the derail. In this connection it is the general practice to install pipe-connected derails without circuit controllers on the Atchison, Topeka & Santa Fe, the Pennsylvania Railroad, the New York, New Haven & Hartford, the Chicago, Rock Island & Pacific, the Delaware & Hudson, the Louisville & Nashville, the Lehigh Valley, the Boston & Maine, the Cleveland, Cincinnati, Chicago & St. Louis, the Pere Marquette, and the Nashville, Chattanooga & St. Louis.

As a safety measure and in order to indicate the position of the derail when it is not connected to the main line switch but is handled separately, a number of the roads use switch circuit controllers attached to the derails. Some of the roads following this practice are the New York Central, Lines East, the New York, New Haven & Hartford, the Santa Fe, the Rock Island, the Boston & Maine, the Delaware & Hudson, the Lehigh Valley, the Big Four, the Pere Marquette, and the Nashville, Chattanooga & St. Louis.

As an additional safeguard circuit controllers are connected to all derails in automatic signal territory whether these derails are pipe-connected or hand thrown on a number of roads, among which are the Baltimore & Ohio, the Delaware, Lackawanna & Western, the Long Island, the Union Pacific, the Southern Pacific, the Philadelphia & Reading, the Chicago, Milwaukee & St. Paul, the Norfolk & Western, the Chesapeake & Ohio, the Erie and the Central of Georgia. While the Nashville, Chattanooga & St. Louis has no derails in automatic signal territory, which is limited, were derails to be installed in such territory they would be equipped with circuit controllers.

Those roads not using the circuit controllers on derails, whether pipe-connected or hand thrown, in automatic signal territory, include the Chicago & Alton, the Southern Pacific Lines, the Canadian Pacific, the Los Angeles & Salt Lake, and the Chicago Great Western, while the Northern Pacific uses them to a very limited extent. It has not been the practice of the Illinois Central to use circuit controllers on derails in automatic signal territory in the past, but on new signal installations made in the past two years they have been installed and the practice will be continued on future work. The Missouri, Kansas & Texas uses the block derail in automatic signal territory in the majority of cases, but when it is necessary to use the split point this type is then equipped with the circuit controllers.

The Use of Pipe-Connected and Hand Thrown Derails

The practice of using a pipe-connected or a hand thrown derail, like the use of the split point or block type varies greatly on the different roads, as revealed in their answers to the questionnaire. The standard practice on some roads is toward the pipe-connected type, while others incline toward the hand thrown derail. Again some roads have about an equal number of both types in service with no preference expressed, while the use of pipe-connected derails on other systems has been discontinued for certain locations. Practically all the roads, however, have both types of derails in service.

Among the roads making it a standard practice to pipe-connect all derails where they operate with main line switches are the Lehigh Valley, the Erie, and the Burlington. All derails installed since 1916 on the Chicago, Rock Island & Pacific have pipe connections to the main line switch stands on all tracks connecting with the main line. The general practice on a line in the central part of the country, road G in the table, is to connect derails by pipe lines to the main track switches on passing sidings and yard leads leading to the main track except in the State of Indiana. Derails on station and industry sidings connected with the main track are hand thrown. In the State of Indiana the law requires lights on non-interlocked derails on passing sidings and on yard leads connected with the main track, and on this road these derails are not pipe-connected to the main line switch but are hand thrown.

The New York, New Haven & Hartford and the Atchison, Topeka & Santa Fe make it a general practice to pipe-connect all new installations to the main line switch stands. There are, however, exceptions in special cases and both types are employed.

The Pennsylvania Railroad, the Baltimore & Ohio and the Cleveland, Cincinnati, Chicago & St. Louis make it a standard practice to pipe-connect all derails to switch stands where these protect main track movements except on unimportant branch lines or where tracks are infrequently used. At such locations the hand thrown derail is employed.

The New York Central, Lines East, has about 80 per cent of its derails pipe-connected to and operated by the switch stands, 14 per cent connected to and operated by a separate lever working a facing point lock, 5 per cent interlocked, while 1 per cent are hand thrown. Approximately 75 per cent of the derails on the Delaware & Hudson and on the Pere Marquette are pipe-connected, while on the Delaware & Hudson about 18 per cent are thrown with an ordinary switch stand instead of by hand.

On the Boston & Maine the majority of the derails are thrown by independent switch stands, but these are gradually being replaced by the pipe-connected type. The Louisville & Nashville connects derails in automatic signal territory with pipes to the switch stands, while those outside this territory are hand thrown.

The general practice of the Illinois Central is to use a hand thrown derail and only in a few cases are the derails connected with the switch stands by pipes, while on the Missouri, Kansas & Texas the derails are all hand thrown and a derail sign is also used to indicate their location. A very small percentage of the derails on the Union Pacific and the Southern Pacific are pipe-connected; it is not the practice of the Union Pacific to operate them in this manner, while the practice of pipe-connecting them on the Southern Pacific has been discontinued. The Long Island has approximately 50 per cent of its derails still pipe-connected, but on all new work they are no longer connected in this manner, while the Chicago, Great Western has taken out all pipe-connected derails and maintains only those that are thrown by hand.

Approximately 95 per cent of the derails on the Northern Pacific are of the hand thrown type, while on the Chesapeake

& Ohio and the Minneapolis, St. Paul & Sault Ste. Marie probably 50 per cent of the derails installed are pipe-connected, the rest being hand thrown. The general practice of the Chicago & Alton is to use the hand thrown split point derail except on side tracks, having a heavy grade descending to a passing track or main line, in which case the pipe-connected derail is installed. The practice of the Canadian Pacific is to use a hand thrown derail except in the vicinity of interlocking plants or in other locations where it may be felt desirable to pipe-connect them to switch stands.

The Use of Derails and the Value of Their Application

In view of the very general use of derails as expressed above, the general opinion of the railroads is that the derail is a desirable safety device and while many of the roads have had no recent occurrences showing the worth of their application, derails have, however, demonstrated their value in the past. The installation of derails on the roads has prevented cars from moving out of sidings due to wind or grade or because the brakes were not properly set, or at locations where cars were moved by outside parties as at coal mines and like industries. The value received in protecting traffic and preventing damage in the past makes their use fully justified, in the opinion of a number of the roads.

Many of the roads report instances having occurred as demonstrating the value of derail installations. The Delaware & Hudson has recently had four instances where cars started to move out of sidings because the brakes were not properly set and the cars were derailed, preventing more serious damage occurring. Many instances have happened on the Rock Island where the use of derails has demonstrated the wisdom of their application, while other accidents have occurred where the failure to put derails on certain tracks has shown the necessity for such a device. On the Northern Pacific derails have quite often prevented the main track from being fouled by cars, while the Canadian Pacific reports that many instances have occurred where the lack of derails has proved their necessity. Cases have occurred on the Nashville, Chattanooga & St. Louis where cars have been started out of sidings from various causes and were derailed before causing trouble, while the Minneapolis & St. Louis in the last several years has had cars blown out of the side tracks by wind storms which have run for some distance on the main track. Derails are felt to be an effective safeguard in such occurrences.

There is a tendency on some lines to extend or make more general the use of derails; among these roads may be mentioned the New York Central, Lines East; the Baltimore & Ohio; the Delaware, Lackawanna & Western; the Chicago, Milwaukee & St. Paul; the Chicago, Rock Island & Pacific; the Lehigh Valley; the Illinois Central, the Boston & Maine; the Union Pacific, and the Nashville, Chattanooga & St. Louis. It is the intention of the New York Central to install derails on all connections of side tracks and main tracks, while the tendency of the Baltimore & Ohio is toward their general use to prevent the fouling of main tracks, runaways down steep grades, over running into open draws and to some extent into pits, such as turntable pits, etc. The Delaware, Lackawanna & Western and the Boston & Maine, in connection with recent construction work, equip all new tracks with derails. The Lackawanna places them on tracks regardless of grade, while the Boston & Maine is equipping existing tracks as rapidly as labor and material conditions will permit. It is the general practice on the Lehigh Valley, the Union Pacific, the Delaware & Hudson and the Illinois Central to install them at all danger points or where conditions may require. The number of derails in service is increasing each year on the Chicago, Milwaukee & St. Paul, but no recent instances have occurred demonstrating the wisdom of their application. This road reports daily derailments having occurred due to

the installation of derails which would not happen if the tracks were not protected with them. However, the damage done by such derailments is generally not great and greater damage could result were the derails omitted at such points. The tendency of the Rock Island is to have all tracks leading

to the main line on which cars are placed properly equipped with derails, while the Nashville, Chattanooga & St. Louis is extending their use and feels that their application on industrial tracks to prevent shippers from pushing cars beyond the clearance point alone justifies their use.

Esch-Pomerene Bill to Increase Commission's Powers

Many Amendments to Commerce Act Proposed But Few Radical Changes in System of Regulation

CHAIRMAN JOHN J. ESCH, of the House Committee on Interstate and Foreign Commerce, introduced in the House on Monday, June 1, a bill to further amend the act to regulate commerce, embodying ideas for the regulation of the railroads after their return to private management. This bill, which was also introduced in the Senate by Senator Pomerene, represents what may be termed the conservative school that favors a minimum of disturbance of the interstate commerce law while bringing about a greater degree of co-operation and of joint use of facilities between railroads, as opposed to the more radical ideas which have been expressed and will be embodied in a bill by Chairman Cummins, of the Senate committee, and which have been advocated by Director General Hines, providing for a government guaranty and a reorganization of the railroads. Mr. Esch is known to have consulted closely with the legislative committee of the Interstate Commerce Commission in drafting the bill, and it represents in general the ideas expressed on behalf of the commission by Commissioner Clark during the Senate committee hearings in January and by Commissioner McChord in a personal statement published on Monday morning. The powers and duties of the commission are considerably increased; it is given a freer hand in several ways along lines on which it has repeatedly made recommendations to Congress. Both because it represents the views of the commission and because of Mr. Esch's position and his high standing and long experience in matters of railway legislation, the bill is expected to have strong support in Congress.

Changes in Rate Sections

The authors of the bill evidently do not agree with those who believe it necessary that the Interstate Commerce Commission should be given a specific mandate to make rates adequate from the standpoint of a return on the investment, but the proposed rule of rate-making goes so far as to say that "the commission in reaching its conclusion as to the justness and reasonableness of any rate, fare, charge, classification, regulation or practice shall take into consideration the cost of labor and other operating costs in so far as they become material in any case under investigation," which is what the commission has always claimed it has done. The bill, however, gives the commission power to prescribe minimum or absolute rates, and, while leaving undisturbed the rate-making powers of the states, it gives the commission a power of joint action with state commissions in proceedings bringing state rates into issue and authorizes the commission to remove undue preference or prejudice or any undue burden upon interstate or foreign commerce which may be caused by state action.

The period of suspension of a rate is limited to 120 days by eliminating the provision for a re-suspension for six months, and if the hearing cannot be concluded within the period of suspension it is provided that the proposed rate shall go into effect, but in case of an increased freight rate or charge the commission may require the interested carriers

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to keep an accurate account of the amounts received and upon the conclusion of the hearing and decision may require the carriers to refund with interest such portion of the increase as shall be found not justified. The prohibition of pooling in section 5 of the act is qualified by the words "except upon specific approval by order of the commission," and it is provided that the commission may approve the unification, consolidation or merger by purchase, lease, stock control or otherwise of two or more carriers, or the pooling of their traffic, earnings or facilities, under terms to be prescribed by it.

Provision for the supervision of security issues and the expenditure of the proceeds is made substantially in the language of the Rayburn bill, passed by the House in 1914, and the authority of the commission, by the issuance of certificates of public convenience and necessity, is required for the construction of new lines or extensions or the abandonment of a line of railroad.

Increased Powers

The regulating powers of the commission are also proposed to be increased by giving it jurisdiction to require a carrier to provide safe and adequate facilities or to extend its line or lines, and whenever the commission shall be of opinion that shortage of equipment, congestion of traffic or other emergency requiring immediate action exists in any section of the country, it is authorized to suspend the carriers' rules and make its own directions with respect to car service and the interchange and use of locomotives, cars and other vehicles, without regard to ownership, during such emergency. This broadens the provisions of the Esch-Pomerene car service act. The commission is also authorized to require joint or common use of terminals upon such terms as it may prescribe and to give directions for preference or priority in transportation, embargoes, or movement of traffic under permits, and in time of war or threatened war the President may certify to the commission that it is essential that certain traffic shall have preference and the commission shall give the necessary directions.

Aside from this emergency power the commission is authorized to require the terminals of any carrier to be open to the traffic of other carriers upon such just and reasonable terms and conditions, including just compensation to the owners, as it may prescribe. It may also require railroads and water carriers to construct suitable docks and terminal connections for the interchange of freight or passengers. The commission is given a freer hand in dealing with complicated rate adjustments by a provision that whenever it is of the opinion, after full hearing, that any rate, fare or charge, classification, regulation or practice "is or will be" unjust, unreasonable, or otherwise unlawful, it may prescribe what will be the reasonable rate, fare, or charge, etc., or the maximum or minimum to be thereafter observed. This is apparently to meet such cases as are often encountered by the commission in which it is difficult to make the change desired without disturbing other rates not immediately involved,

and it would seem as if the language was broad enough to give the commission almost complete authority over rates. The present rule giving the commission's orders a life of two years is changed to provide that they shall remain in force for a specified period or until further order.

The commission is authorized to prescribe the divisions of joint rates or fares and in time of car shortage, congestion or other emergency may establish temporarily such through routes as in its opinion are necessary or desirable in the public interest, regardless of the general provision against requiring railroads to "short-haul" themselves.

The case involving the commission's efforts to examine correspondence of the Louisville & Nashville is recalled by a provision that the commission may have access to all documents, papers and correspondence.

The provisions of the act are extended by the proposed amendments to cover companies engaged in the transmission of intelligence by wire or wireless and to water carriers and all pipe line companies, telegraph, telephone and cable companies operating by wire or wireless and "all persons, natural or artificial, engaged in such transportation or transmission as aforesaid as common carriers for hire" are declared to be common carriers.

The term "water" is to include the lakes, rivers, canals and other inland waterways within or bordering on the United States or the territory of Alaska, the Panama Canal, and all waters within or without the three-mile limit from the coast of the United States or the territory of Alaska traversed by vessels permitted to engage in the coastwise trade. The definition of the term "railroad" is broadened to include car floats, lighters, terminals, and of "transportation" to include locomotives and vessels.

The term "car service" is defined to include the "use, control, supply, movement, distribution, exchange, interchange and return of locomotives, cars and other vehicles used in the transportation of property, and the supply, movement and operation of trains by any carrier subject to this act," and it is made the duty of every carrier by railroad subject to the act "to furnish safe and adequate car service" and to establish just and reasonable rules, regulations and practice with respect to car service, and the commission is given discretionary power to prescribe such rules and regulations, including the compensation to be paid by carriers for the use of each other's locomotives or other vehicles as well as cars.

Mr. Esch has prepared a synopsis of his bill in which he says, in part:

"The prohibition imposed by the Panama canal act upon railroad-owned vessels is modified to permit such vessels to continue in service, even when competition may be excluded, prevented, or reduced, if the commission finds such service in the public interest.

"The commission can order docks and tracks of carriers to be connected and suitable docks to be constructed by either the rail or water carrier and determine the sums to be paid by either.

"To prevent destruction of inland water transportation and for other purposes, the commission is given power to prescribe 'joint rates or maximum or minimum or maximum and minimum' joint rates, and also proportionate rates.

"The commission is authorized to fix the division of rates between carriers. Under the exercise of this power it will be possible for weak lines or so-called independent short lines to receive such share of the joint rate as will enable them to live.

"Pooling of freight and earnings, unification, consolidation or merger may be permitted by the commission upon complaint, or upon its own initiative without complaint, provided it finds these 'to be in the interest of better service or greater economy in operation.' The absorption of the so-called 'weak sisters' may thus largely be met without resort

to compulsion, federal incorporation, or other complicated, protracted, and probably unconstitutional methods.

"One of the evils of the past has been the construction of parallel or unwarranted lines, resulting in weak, unprofitable and speculative roads. The bill requires that, before there can be any extension or construction of new lines, or acquisition or operation of any line, a 'certificate of convenience and necessity' must be secured from the State regulating body of New York, Wisconsin and other States.

"The 'transmission of intelligence,' as effected by wire or wireless system, is to be more fully placed under the commission. The interstate commerce act omitted, to give the commission authority for complete regulation of these systems. The bill seeks to do this, except as to business wholly intrastate. To this end the commission can order extensions of lines, if in the public interest, prohibit rebates and discriminations require the filing and publication of rates and schedules, prohibit the doing of business or the collection of charges unless and until such publication has been made, and require transmission to be continuous from place of origin to destination.

"The practice of state commissions in reducing intrastate rates and thereby placing an undue burden upon interstate traffic has created a growing sentiment in favor of placing the rate-making wholly under the Interstate Commerce Commission. The bill does not do this, but prescribes a method of adjusting differences by allowing the state commissions to sit with the Interstate Commerce Commission and participate in the hearings, but the latter is to make the findings. Any undue burden placed upon interstate or foreign commerce is, under the bill and following the decision of the Supreme Court in the United States in the Shreveport cases, declared to be unlawful. The findings of the commission and orders based thereon 'shall be observed, any act, decision or order of any state or state authority to the contrary notwithstanding.'"

Some of the principal changes in the law proposed by the Esch bill are shown in the following paragraphs, the new language being printed in italics.

"From and after , 19 , no carrier by railroad subject to this act shall undertake the extension of its line of railroad, or the construction of a new line of railroad, or shall acquire or operate any line of railroad, or extension thereof, or shall engage in transportation under this act over or by means of such line of railroad, or extension thereof, unless and until there shall first have been obtained from the commission a certificate that the present or future public convenience and necessity require or will require the construction, or operation, or construction and operation, of such line of railroad, or extension thereof, and no carrier by railroad subject to this act shall abandon any portion or all of its line of railroad, or the operation thereof, unless and until there shall first have been obtained from the commission a certificate that the present or future public convenience and necessity permit of such abandonment."

"The application for and issuance of any such certificate shall be under such rules and regulations as to hearings and other matters as the commission may from time to time prescribe, and the provisions of this act shall apply to all such proceedings. Upon receipt of any application for such certificate the commission shall cause notice thereof to be given to the railroad commission, or public service or utilities commission, or other appropriate authority, of each state in which such line of railroad, or extension thereof, is proposed to be constructed or operated, or any portion or all of such line of railroad, or the operation thereof, is proposed to be abandoned, with the right to be heard as hereinafter provided with respect to the hearing of complaints or the issuance of securities."

"The commission shall have power to issue such certificate as prayed for, or to refuse to issue it, or to issue it for a portion or portions of a line of railroad, or extension thereof,

described in the application, or for the partial exercise only of such right or privilege, and may attach to the issuance of said certificate such terms and conditions as in its judgment the public convenience and necessity may require. From and after issuance of such certificate, and not before, said carrier by railroad may comply with the terms and conditions of such certificate or attached to the issuance thereof and proceed with the construction, operation, or abandonment, covered thereby. Any construction, operation or abandonment contrary to the foregoing provisions of this section may be enjoined by any court of contempt jurisdiction at the suit of the United States, the commission, any commission or regulating body of the state or states affected, or any party in interest, and any carrier knowingly violating any of the foregoing provisions shall be guilty of a misdemeanor and upon conviction shall be liable to the penalties provided for violation of this act.

"The commission may, after hearing, in a proceeding upon complaint or upon its own initiative without complaint, authorize or require by order any carrier by railroad subject to this act, party to such proceeding, to provide itself with safe and adequate facilities for performing as a common carrier its car service as that term is used in this act, and to extend its line or lines, and any carrier subject to this act engaged in the transmission of intelligence, party to such proceeding, to provide itself with safe and adequate facilities for performing as a common carrier its service of transmission as that term is used in this act, and to extend its line or lines; Provided, That the commission shall find that such provision of facilities or extension, is reasonably necessary in the interest of public convenience and will not impair the ability of the carrier to perform its duty to the public."

Sec. 5. That the first paragraph of section five of the commerce act be amended to read as follows:

"That, except upon specific approval by order of the commission as in this section provided, it shall be unlawful for any common carrier subject to this act to enter into any contract, agreement or combination with any other common carrier or carriers for the pooling of freights of different and competing railroads, or to divide between them the aggregate or net proceeds of the earnings of such railroads, or any portion thereof; and in any case of an agreement for the pooling of freights as aforesaid, each day of its continuance shall be deemed a separate offense: Provided, That whenever the commission shall be of opinion, after hearing upon application of any carrier or carriers subject to this act, or upon its own initiative, that the unification, consolidation or merger by purchase, lease, stock control, or in any other way, similar or dissimilar, of two or more carriers subject to this act, or of the ownership or operation of their properties, or of designated portions thereof, or that the pooling of their traffic, earnings or facilities to the extent indicated by the commission, will be in the interest of better service to the public, or economy in operation, or otherwise of advantage to the convenience and commerce of the people, the commission shall have authority by order to approve and authorize such unification, consolidation, merger, or pooling, under such rules and regulations, and for such consideration as between the said carriers and upon such terms and conditions, as shall be found by the commission to be just and reasonable in the premises.

"The commission may from time to time, for good cause shown, make such supplemental orders in the premises as it may deem necessary or appropriate, and may by any such supplemental order modify or set aside the provisions of any previous order as to the extent of the pooling, or as to the rules, regulations, terms, conditions or consideration currently moving in respect of any unification or consolidation of operation and not of ownership, or of pooling, so heretofore approved and authorized.

"The carriers affected by any such order shall be, and they are hereby, relieved from the operation of the 'anti-trust laws,'

as designated in section one of the act approved October 15, 1914, entitled 'An act to supplement existing laws against unlawful restraints and monopolies, and for other purposes,' and of all other restraints or prohibitions by law, in so far as may be necessary to enable them to effect any unification, consolidation, merger or pooling so approved by order under and pursuant to the foregoing provisions of this section."

Sec. 6. That the fourth paragraph of section five of the commerce act be amended by adding at the end thereof the following:

"Provided further, That the commission may in like manner extend the time during which such service by water may continue to be operated until its further order after hearing, even where it finds that competition may be excluded, prevented, or reduced, if it also finds that the service is in the interest of the public and of advantage to the convenience and commerce of the people, and that a discontinuance thereof would be substantially injurious to the commerce or localities affected."

Sec. 13. That section thirteen of the commerce act be amended by adding at the end thereof two new paragraphs reading as follows:

"Whenever in any investigation under the provisions of this act there shall be brought in issue the lawfulness of any rate, fare, charge, classification, regulation, or practice made or imposed by authority of any state, the commission, before proceeding to hear and dispose of such issue, shall cause such state or states to be notified of the proceeding. The commission may confer with the authorities of any state having regulatory jurisdiction over the class of persons and corporations subject to this act with respect to the relationship between rate structures and practices of carriers subject to the jurisdiction of such state bodies and of the commission; and to that end is authorized and empowered, under rules to be prescribed by it, and which may be modified from time to time, to hold joint hearings with any such state regulating bodies on any matters wherein the commission is empowered to act and where the rate-making authority of a state is or may be affected by the action taken by the commission. The commission is also authorized to avail itself of the cooperation, services, records and facilities of such state authorities in the enforcement of any provision of this act.

"The commission shall have authority, after full hearing, to make such findings and orders as may in its judgment tend to remove any undue preference or prejudice as between persons or localities in state and interstate or foreign commerce, or any undue burden upon interstate or foreign commerce, which is hereby forbidden and declared to be unlawful, and such findings or orders shall be observed while in effect by the carriers parties to such proceeding affected thereby, any act, decision, or order of any state or state authority to the contrary notwithstanding."

Other Bills

The question of getting the telegraph and telephone lines returned to their owners was given precedence for the time being over the more complicated matter of railroad legislation by both the House and the Senate committees on interstate commerce, both of which began hearings on the situation regarding the wire companies last week. The Senate committee on Tuesday ordered a favorable report on the bill providing for the immediate return of the wire companies. The House committee switched on Monday to the daylight saving law which apparently has divided the country into two opposing camps, that of the farmers, who prefer to have the law repealed to adjusting themselves to a new relation between clock time and sun time, and that of the urban population that is getting the benefit of an additional daylight hour.

Chairman Esch of the House committee is planning to use his bill as a mark to shoot at at the railroad hearings which he proposes to hold as soon as the committee's docket is cleared of some of the less intricate questions, and Chairman Cum-

mins of the Senate committee has not yet introduced the bill embodying his plan of railroad reorganization which he plans to have his committee work on before holding hearings.

Director General Hines and Swagar Sherley, director of the Division of Finance of the Railroad Administration, were given a hearing before the House appropriations committee on Tuesday on the \$1,200,000,000 appropriation asked by the Railroad Administration.

Senator Cummins has reintroduced as S. 641 the bill he introduced at the last session limiting the President in his rate-making power to the powers formerly possessed by the railroads before federal control by restoring the complete jurisdiction of the Interstate Commerce Commission, which is now limited to a review of rates after they are put into effect by the President, and making it clear that the carriers while under federal control shall be subject to all laws and liabilities as common carriers. The Senate committee on Tuesday ordered the bill to be reported favorably.

Senator Cummins has also reintroduced his concurrent resolution to provide for the creation of six joint congressional committees on reconstruction, one of which would be known as the joint congressional committee on interstate transportation, for the purpose of investigating and reporting on the permanent relation which the government should sustain to the common carriers, whether the railroads should be returned to their former owners and operated as heretofore, or whether government operation should continue with or without government ownership; or if private ownership is to continue and private operation resumed, what system of regulation and control will be best adapted to secure efficiency in service, reasonable rates and fairness to the capital invested. The committee would also study the relation which should be established between inland water transportation and the railways.

Senator McKellar has introduced a bill providing that where freight is offered to a common carrier to be transported by it to some foreign port, the initial carrier shall be required to issue a through bill of lading and all steamship carriers designated in such bill of lading shall carry out the contract entered into by the initial carrier under penalty of not being permitted to use the ports of the United States should they be guilty of non-compliance.

Senator Cummins has also introduced a bill, S. 1025, making it unlawful for any common carrier to charge a higher rate over the same line and in the same direction for the interstate transportation of any article or commodity having been grown, produced or manufactured in the United States than it charges for a like article or of a substantially similar article or commodity when imported into the United States from a foreign country and that the proportion of all through rates received by carriers transporting such imported articles or commodities shall be held to be the rate or charge made and received for the transportation thereof in this country. It is also provided that no common carrier in conforming to the foregoing provision shall increase any rate without the approval of the Interstate Commerce Commission entered after a full hearing upon an application for such increase.

Another bill introduced by Senator Cummins, S. 1026, provides that carriers shall receive and transport with each passenger tendering the same baggage, including the sample baggage of such passenger, not exceeding 150 pounds for an adult and 75 pounds for a minor less than 12 years old, without compensation other than the passenger transportation charge. Baggage in excess of the weight specified is declared to be excess baggage and the carriers are required to carry such excess baggage with the passenger, provided that carriers shall be required to carry baggage only on trains equipped with a baggage car. Samples, goods, wares, appliances and catalogues of commercial travelers or their employers used both for the purpose of transacting their business and carried

with them solely for that purpose, when securely packed and locked in substantial trunks or sample cases of convenient shape and weight for handling, are declared to be sample baggage within the meaning of the act. It is also provided that in the case of the loss or damage to such sample baggage the carrier shall not be liable for any greater proportion of the value or of the damages than the excess baggage fare bears to the current rate of freight nor for any greater amount than the value.

Overwhelming Sentiment Against Government Ownership

BY A QUESTIONNAIRE conducted recently by the Association of Railway Executives (61 Broadway, New York) it is shown that the general public, as estimated by editors all over the country, would vote seven to one against government ownership of railroads. The questionnaire was answered by nearly 6,000 editors of daily and weekly newspapers throughout the country. It was sent to every editor in the country (13,424) and brought replies from 44 per cent; and 83 per cent of those replying reported their communities in favor of a resumption of private management.

The questionnaire was completed before President Wilson announced in his recent message to Congress that the government would relinquish control of the railways at the end of the year. Editors were asked not to give their personal opinions, but to appraise the sentiment in their communities. The four chief questions were as follows:

1. Does public opinion in your judgment seem to favor the return of railroads to private ownership and operation as soon as this can properly be accomplished?
2. If so, is this opinion in part based on the desire to see competition in service and facilities restored?
3. What is the present sentiment in your community on government ownership and operation of railroads?
4. What has been the feeling regarding the proposal to extend the period of government operation for five years?

On the first question 83 per cent voted yes, 11 per cent voted no, 4 per cent doubtful and 2 per cent expressed no opinion.

On the second question 75 per cent voted yes, 6 per cent no, with 5 and 14 per cent doubtful and blank respectively. On the third, 78 per cent estimated public sentiment as against government ownership, 11 per cent for, with 7 per cent doubtful and 4 per cent blank. On the fourth, the vote was: Against, 74 per cent; for, 10 per cent; doubtful, 9 per cent; blank, 7 per cent.

Canvass of the replies from different states, north, south, east and west, showed that sentiment on this subject was not divided on party lines, Texas and Pennsylvania, Maine and Tennessee showing similar percentages. The strongest sentiment against government ownership was found to be in New England and the south, sections widely apart in political sentiment. Only 4 per cent of New England editors and 7 per cent of southern editors reported their people favoring government ownership.

The Trans-Canada Limited, the new through express train of the Canadian Pacific, which was put in service on June 1, runs every day in the week and will run from Toronto as well as from Montreal. From both Montreal and Toronto the train has compartment cars, and ordinary sleeping cars. It has no coaches. On the first day the train left Montreal with seven cars, and about 85 passengers. For all of the trains making this four-day run the equipment required is 59 sleeping cars, 15 dining cars, 12 observation cars, 5 compartment cars, 12 baggage cars, and 24 locomotives. The estimated value of this equipment is \$6,000,000.

Railway Developments in Foreign Countries

Materials Required for Mexican and Siberian Railways; Problem of Railway Transportation in Italy.

THERE IS A hard fight going on, says George Mallet in a recent issue of the Weekly Bulletin of the Canadian Department of Trade and Commerce, between the owners of vested and prospective interests in the neighborhood of the projected routes of the next Transandine railway.

While a party of government engineers are busy surveying the Lonquimay route, which is designed to open up important international intercourse between the Atlantic port of Bahia Blanca and the Pacific port of Lebu, running through the heart of the Chilean coal mining zone, a determined attempt is being made to counterattract public attention to the Nuble route, which runs through San Carlos and San Fabian.

Extensions of Kansas City, Mexico & Orient

According to announcement by the department of communications and public works of the Mexican government, the Kansas City, Mexico & Orient system in this country is to be greatly extended just as soon as provisions can be made by the company for resuming construction work. At the time the revolutionary period began, nearly nine years ago, the main line of the Kansas City, Mexico & Orient was getting well along toward completion. Two unfinished gaps in Mexico and a 50-mile stretch of country in Texas are all that are lacking to make the line complete between Kansas City, Mo., and the port of Topolobampo, on the Pacific coast. The division which runs from Chihuahua to Marquez lacks only 75 miles of reaching the Rio Grande. From Chihuahua the track of the Mexico Northwestern is used as far as Sanchez. The next division is from Ojo del Buey to Los Hornillos. Then follows another unfinished gap to Fuerte. From Fuerte to Topolobampo the road has been in regular operation for several years.

The company has made application to the department of communications and public works for a concession to construct branch lines to Guadalajara, San Luis Potosi, Aguas Calientes and a number of other cities and towns.

Demand for Locomotives and

Structural Steel in France

Reconstruction of industry or "reconstitution," as the French prefer to term it, for the word implies the genesis of a new order of things rather than a resettlement of the old, is undoubtedly the most vital problem which faces France today, says the Bulletin of the Federation of British Industries in a recent issue. It is a question which presents enormous difficulties by reason of its various possible solutions.

In some quarters it is strongly felt that if France is to retain what monetary wealth remains to her, the production of the materials required must of necessity be undertaken within her own borders. On the other hand the impatient producer, whose works in the war-damaged area have been destroyed, maintains that the industrial renaissance is of sufficient urgency to warrant unrestricted importation from foreign sources of all materials not immediately obtainable from the home manufacturer.

As a third illustration may be cited the case of the manufacturer whose business, so far from suffering injury has actually been expanded by the demands of the war added to the fact that the destruction of industry in the northeastern area

has considerably contracted the productive resources of the country. From his point of view unrestricted importation is directly opposed to the interests of French industry.

Whatever may be the best policy for France as a whole, all authorities are agreed that the first undertaking in the redevelopment of industry in the devastated area must be the building and equipment of new railways. The embankments and cuttings of the old railways have not been greatly harmed. Steel rails are plentiful and there is no great shortage of sleepers or permanent way material.

It is however in the matter of structural steel-work for bridges that a want is felt and it is doubtful whether that want can be supplied by French steel works alone during the forthcoming summer.

Military Railways in France

It is common knowledge that the railway network laid down in France by the British military authorities, and including both standard gage heavy lines and narrow gage light tracks, amounts to a total of hundreds of miles, says the Railway Gazette (London) in a recent issue. Considerable construction was also carried out by the American Army. Among the problems connected with the "clearing-up" of the war areas is that of the disposal of these railways. Both the British and American authorities have been willing to allow France to retain such lines as may be required for ordinary commercial purposes or would be of use during the period of reconstruction, but a good deal of the mileage is not required by the French Government. This applies to both standard and narrow gage track. For example, one section of main line which before the war was only a double track line has been quadrupled by the British, and the extra tracks are now being taken up, since local opinion considers them unnecessary for the normal gage light railway, which were extremely useful for hauling men and materials within the actual war zone, but are laid in districts where the commercial traffic which would now offer would be of so slight and unremunerative a nature as to render their retention quite unnecessary, while lines of this nature are not always suited to civilian requirements. An Allied Commission is now to investigate the whole question. This commission will have plenary powers to decide on the future of all the railways constructed in France by the British and American armies for war purposes, and the surplus track, etc., will be offered to the world's buyers.

The Fourth Lyons Fair

The Lyons Fair which took place from March 1 to 15 was most successful not only from the standpoint of the number of exhibitors which was considerably over that of any preceding year, but also from the point of view of the diversification of the products shown.

So many were the applications for space that the fair will henceforth be held in two sections, one in the spring from March 1 to 15 and one in the fall, from October 1 to 15. Machinery, transport materials, and similar products will be included in the latter.

At the fair this spring there were 618 American firms represented, as compared with 527 in 1918; 25 in 1917 and only 4 at the first fair in 1916. Canada was represented by 55

concerns and the Canadian National Railways and the Canadian Pacific Railway each had considerable space.

Belgium Needs Telephone and Telegraph Material

During the German occupation a great quantity of material and accessories belonging to the Belgian government-owned telegraph and telephone systems, says Consul Charles R. Nasmith, Brussels, was destroyed or taken away by the enemy, so there is a great need of material at the present time.

American firms who wish to make offers for the sale of electrical apparatus or other material for telegraph or telephone installations might be interested to know, he says, that bids should be submitted to the Administration des Telegraphes et des Telephones, Hotel des Postes et des Telegraphes, Place de la Monnaie, Brussels. Each bid, according to official information just received at the consulate, should be accompanied with descriptions, photographs, etc., when it has to do with apparatus. As for the cables, specifications must be given, and whenever possible samples should be sent.

Railway Extensions in Siberia

The Times (London) in a recent issue prints a telegram from Omsk, the seat of the Kolchak government, saying that the government of Admiral Kolchak has decided to begin the construction of a railway from Krasnoufimsk (west of the Urals) to Tomsk, western Siberia (a distance of over 800 miles).

This line, which is intended to relieve the Siberian Perm-Samara Railways, should greatly contribute to the development of the productive forces of Siberia and the Urals.

What the Siberian Railways Need

L. D. Wilgress, Canadian trade commissioner at Vladivostok, has sent to the Weekly Bulletin of the Canadian Department of Trade and Commerce a long list of materials, giving an idea of what was needed for the Siberian railways for the first four months of 1919.

In speaking of the Siberian railway situation, Mr. Wilgress says that the hope is expressed by those competent to express an opinion that the new inter-allied control will be able to restore the normal railway facilities to normal working order in from five to six months.

The plan for the inter-allied control of the Siberian railways, as noted in the *Railway Age* of March 14, page 612, gives the Chinese Eastern Railway and the various railway systems in Siberia over to the control of two boards: (1) Technical; (2) Military, under the general supervision of a special inter-allied committee. Mr. John F. Stevens, chief of the American Railway Commission in Siberia, is appointed president of the Technical Board, and he is to be assisted by the special corps of American railway engineers, who have been investigating conditions for over a year. The Russian personnel of the railways is to be retained.

"It remains yet to be seen as to whether this plan will prove workable," says Mr. Wilgress. "The railway situation is the fundamental problem in the economic restoration of Siberia. The re-establishment of normal transport will bring about a resumption of trade with foreign countries.

"At the present time it is practically impossible for the co-operative societies and private firms to ship goods into the interior in the ordinary way, and the port of Vladivostok is congested with supplies which it will take several months to clear. It is estimated that over 1,000,000 tons of goods are lying at Vladivostok awaiting transport into the interior, while nearly 1,000,000 tons of Siberian products are also lying at points along the railway line awaiting transport to ocean ports for shipment abroad. It may be said that the

railway facilities are completely disorganized, and it is with great difficulty that military and other essential supplies are transported to destination.

"The greatest need is for new locomotives, spare parts for the repair of the existing rolling stock, lubricating oil, and other supplies essential for the operation of a railway system. The British and American governments have already, through their respective commissions, begun to take energetic measures for the relief of the situation. A consignment of locomotives is being imported by the British Railway Commission, and supplies of lubricating oil and other materials are coming forward from the United States.

"One of the objects of the agreement just concluded is to co-ordinate these various activities of the principal powers interested in the relief of the Siberian Railway system."

The list forwarded by Mr. Wilgress is given below. The difficulty of securing the materials noted, he says, is largely instrumental in the present disorganization and breakdown of the Siberian railway facilities.

Materials Required for the Siberian Railways

Classification	Quantity
Petrol	*poods 100,000
Benzine	" 2,000
Mineral oil, also naphtha	" 20,000
Cylinder oil, viscosin type for super-heaters	" 10,000
Car axle oil	" 250,000
Indigo copying paper	reams 500
Graphite in powder for foundry works	poods 300
Muriatic acid for soldering	" 1,000
Sal ammoniac, in lumps	" 50
Sal ammoniac, in powder	" 50
Glue for joiner's works	" 200
Glue for painting works	" 200
Asbestos packing, width from 1/10 in. up to 1 1/2 in.	" 300
Steatite packing, width from 3/4 in. up to 1 1/2 in.	" 900
Glass paper from No. 0000 to No. 4	sheets 60,000
Emery paper from No. 00 to No. 5	" 30,000
Paper from No. 0000 to No. 5	" 20,000
Emery cloth from No. 0 to No. 4	" 20,000
Cloth from No. 000 to No. 7	" 50,000
In powder, large, intermediate, small	poods 30
In lumps from 4 1/2 in. to 12 in.	"
Section square, semi-circular, circular, flat and trihedral	pieces 200
Powder, large, middle, small and dust	poods 100
Rings of special dimensions by sketches	pieces 600
Rubber hoses between locomotive and tender of different dimensions	" 1,200
Rubber hoses for Westinghouse brakes—	
Length, 610 mm.	" 3,000
Length, 760 mm.	" 1,000
Rubber packing rings for Westinghouse brakes—	
No. 2	" 3,500
No. 3	" 3,000
Rubber rings for gage glasses of different sizes	" 10,000
Rubber rings for passenger engines	" 1,000
Rubber cloth of different width without layers	poods 80
Rubber with one layer	" 100
Rubber with two layers	" 30
Gage glasses for boilers and tanks from—	
3/8 in. to 3/4 in. and from 12 in. to 18 in.	pieces 12,000
Safety glass, Klinger	" 200
Iron gas pipes, d. from 1/4 in. to 4 in.	1 foot 140,000
Connecting parts for gas pipes (counter screws, crosses, nipples, branch pipes, three-way pipes, set-square, flanges) ..	" 20,000
Smoke-consuming pipes for boilers	" 30,000
Gun metal pipes int. d. 1 3/16 in. to 2 3/4 in.	poods 3,000
Wire iron netting of simple and diagonal plaiting with holes from 1 mm. to 10 mm.	sq. arshines 10,000
Steel balls d. from 5/32 in. to 1/4 in.	pieces 2,000
Engine, tender and car tires, by sketches	" 10,000
Babbitts for cars	poods 4,000
Babbitts for engines	" 4,000
Lead	" 21,000
Tin	" 5,000
Zinc in plates	" 700

* 1 pood = 36 pounds.

British Railway Costs Under Government Control

Continued requests for information on the part of the British Parliament and promises on the part of the government brought out on May 14 an official statement by the Board of Trade "showing the cost of running the railways of Great Britain during the period of government control" and covering the period from August 5, 1914 to December 31, 1918.

The statement shows a balance of receipts over expenditures and in excess of the guarantee of the compensation paid to the railroad companies. The receipts, however, include a

total of £112,000,000 as an estimate covering government traffic if charged at authorized pre-war rates.

The statement was prepared by Sir Albert Wyon and Sir William Plender, and is supplemented by a Board of Trade statement signed by Sir Auckland Geddes, minister of national service and reconstruction.

According to the accounts the receipts and expenditures were as follows:

	Receipts	Expenditure	Balance
1913.....	£118,700,935	£75,127,210	£43,573,725
1914.....	47,918,188	31,782,832	16,135,356
(Aug. 5 to Dec. 31.)			
1915.....	130,358,044	85,028,262	45,329,782
1916.....	145,871,085	95,756,706	50,114,379
1917.....	164,279,430	108,877,932	55,401,498
1918.....	177,584,321	131,326,295	46,258,026

The revenue includes not only the receipts from the ordinary passenger and goods traffic, but the estimated value (reckoned at authorized pre-war rates) of government traffic during the war. For each year of control this value is:

1914 (from Aug. 5).....	£3,500,000
1915.....	10,279,104
1916.....	20,649,126
1917.....	35,698,554
1918.....	41,917,024
Total	£112,043,808

These figures do not include the value of additional services performed by means of steamboats, docks, canals, etc., which may be estimated roughly at from £10,000,000 to £15,000,000.

£95,313,607 IN COMPENSATION

The compensation payable to the railway companies in respect of control periods is limited to the net receipts of the year 1913, with the addition of 4 per cent on capital expenditure brought into use since the beginning of the war. The compensation actually so paid is given in Sir Auckland Geddes' statement as:

1914 (from Aug. 5).....	£15,946,839
1916.....	14,039,674
1917.....	24,075,768
1918.....	41,251,326
Total	£95,313,607

The above figures, states Sir A. Geddes, include provisional allowances for deferred maintenance of permanent way, rolling stock, and plant; but do not include any provision for "extra wear and tear." This item cannot be ascertained at present; but the auditors advise that the cost of making good the "extra wear and tear" will be considerable.

Sir A. Geddes also gives a revised estimate of costs for the current financial year. The figures of £90,000,000 to £100,000,000, he says, were quoted by the minister-designate (Sir Eric Geddes) in moving the second reading of the ministry of ways and communications bill. These figures were the best estimate then available of the increased cost of working during the two years of extended government guarantee, as compared with the cost in 1913. The following is the present estimate of increased cost in working during the financial year ending March 31, 1920, as compared with 1913:

War wage and other concessions, £57,000,000; eight-hour day, concessions recently granted or under consideration, £20,000,000 to £25,000,000; extra cost of materials and coal, £27,000,000; total, £104,000,000 to £109,000,000.

The Problem of Railway Transportation in Italy

In response to the criticism of the Italian railway service at the present time, a statement has recently been made public by the director general of the Italian State Railways, which outlines some of the difficulties with which the railway administration has been confronted and the steps that have been and will be taken for improvement. The report, which has been translated and sent to Commerce Reports by Trade Commissioner H. C. MacLean at Rome, is of special interest

to American readers for the emphasis it places on the assistance rendered by the American railway supply field and for the outline it gives concerning future requirements. It will be borne in mind that the Italian State Railways have recently ordered 150 more locomotives in the United States (from the American Locomotive Company) in addition to the 150 mentioned.

The abstract forwarded by Mr. MacLean follows:

Special emphasis is laid on the fact that since the signing of the armistice the requirements of the military authorities in the matter of railway transportation have not been reduced to the extent that the general public expected. During October, 1918, the last month of the war, 22,592 trains were operated for the transport of troops and various military supplies; in March, 1919, the military authorities still required 16,251 trains. In the matter of supplies, the average number of freight cars loaded daily with war materials in October, 1918, was 6,300, while the number averaged only 3,000 in March, 1919. This reduction made possible a large increase in the transportation of goods for the general public. In October, 1918, the average number of cars loaded at the ports with merchandise for the public was only 450 per day, whereas in March, 1919, it reached an average of 2,300 cars. For grain, rice and flour, 700 cars per day were loaded in March, as against 400 in October. For wine, there are loaded to-day 260 cars, as against 50 in the same period of the former year.

PROMPT DELIVERY OF AMERICAN ORDERS

The most serious obstacle which must be overcome if the railroad administration is to furnish the service maintained previous to the war arises from the fact that the rolling stock employed on the Italian railways is in bad condition. This is because the Italian firms specializing in the construction of railway materials were obliged during the war to devote practically all of their energies to the manufacture of munitions, and little could be done in the matter of new construction or repairs. The railroad administration did, however, succeed in obtaining the delivery of most of the material ordered before the war which was in process of construction in July, 1914, amounting to 300 locomotives, 570 passenger cars, 550 baggage cars, and 5,300 freight cars. In addition, orders were placed in the United States for 3,000 freight cars and 100 locomotives, and in Italy additional orders for 114 steam locomotives, 76 electric locomotives and 6,100 freight cars. The director general states that it was possible to obtain prompt delivery of the material ordered in America, which contributed materially to the solution of the railway problem during the war, and adds that the locomotives were especially useful, being well adapted to hauling heavy military trains. On the other hand, he calls attention to the fact that the delivery of the equipment ordered in Italy was held up, so that up to the present time it has been possible to obtain only 24 steam locomotives, 38 electric and about 1,200 cars.

In addition to the orders placed by the railroad administration during the war, the ministry of arms and munitions and the commission for national fuels, appreciating the lack of transportation facilities, endeavored to obtain for their own use a considerable number of railway cars in order to facilitate the movement of military supplies and fuel for the army. In November, 1917, the ministry of arms and munitions placed an order for 1,000 freight cars, and in June, 1918, the commission for national fuels ordered 10,000 cars. These orders were given to Italian firms, who were assured by both the ministry and commission that the question of furnishing the materials required for the construction of the cars would be taken care of. In spite of this assurance, serious delays occurred, and at the present time only the first

1,000 cars ordered in 1917 by the ministry of arms and munitions, and about 120 cars of the 10,000 ordered by the commission for national fuels, have been delivered.

Owing to the difficulty in obtaining deliveries from Italian manufacturers toward the end of the war, the railroad administration placed additional orders in America for 150 locomotives and 10,000 cars. Of these locomotives, 35 have already reached Italy, 80 are in transit or in process of being delivered in America, and the remainder will probably be delivered during April. Of the cars, about 1,000 have already been delivered, and as deliveries are being made with regularity, it is believed that the entire number will be available before the end of 1919.

NEEDS OF ITALIAN RAILWAYS FOR FIVE YEARS

At the end of the war the railroad administration, realizing the urgent necessity for a betterment in the matter of rolling stock, and to insure the continuance of activity on the part of the Italian firms which had been exclusively engaged in the manufacture of military supplies, immediately took up the question of placing new orders for equipment with Italian firms, and a program covering the needs of the railways for the five years following the war was presented to the inter-ministerial committee charged with promoting and co-ordinating the action of the various branches of the government during the transition period following the cessation of actual hostilities. This program included the purchase of 524 steam and electric locomotives, 1,200 passenger cars, 600 baggage cars, and 5,000 freight cars, of which, however, it has only been possible to place orders for 520 locomotives, 640 passenger cars, 300 baggage cars, and 2,850 freight cars, distributed among the different Italian manufacturers according to their capacity.

There are therefore actually in construction 770 steam and electric locomotives, 640 passenger cars, 300 baggage cars, and 27,700 freight cars, to which will soon be added additional orders which are in process of distribution among Italian firms, covering 560 passenger cars, 300 baggage cars, and 2,150 freight cars, which are still needed to complete the five-year program mentioned above.

EQUIPMENT FOUND IN RECOVERED TERRITORY

Regarding recovered territories, the director general states that on the railroads of the Trentino and of Julian Venezia 350 locomotives, 700 passenger and baggage cars, and 9,260 freight cars were found, to which should be added 123 locomotives, 100 passenger cars, and 2,360 freight cars which the Italian Armistice Commission at Vienna has decided should be delivered as compensation for equipment which was removed at the time of the armistice. It has also leased 64 locomotives from the Austrian and Czecho-Slovak railroads for the transportation of food trains, which are being operated for Austria and Bohemia. From the number of locomotives which Germany must deliver to the Allies, 200 former German locomotives have been allotted to Italy by France.

TRAFFIC ADJUSTING ITSELF TO PEACE CONDITIONS

The acute period in railway transportation seems to have passed, and the director general is of the opinion that from now on a gradual improvement may be expected. It is stated that the lines in the invaded regions and in the newly recovered territories have, with few exceptions, been put in such shape that, although conditions are not normal, the regular traffic is possible. The report upon the service at the port of Trieste shows that in March, 1919, an average of 239 cars per day were loaded, which approaches the average for the year 1913, when the traffic was considered unusually heavy. On the entire Italian system those lines which during the war suffered sudden changes which interfered with the regular operation of trains are having their former service

gradually restored, and traffic as a whole is slowly becoming adjusted to the peace-time conditions. As has been stated the military requirements are gradually diminishing. During December, 1918, the average number of cars loaded daily was 8,610. This number was increased March, 1919, to 11,110, and in April it is expected that it will reach an average of 12,000 cars.

BOTH COAL AND ROLLING STOCK NEEDED

An improvement in Italian railway service will depend upon two factors—an adequate supply of coal and an increase in the amount of rolling stock available. The hope is expressed that the matter of fuel will be benefited by the settlement of labor troubles in England, which so materially reduced the amount which Italy had expected to receive from this source, and by the urgent representations made by the Italian delegation at Paris, which have caused the Allies to give serious consideration to the problem of overcoming Italy's lack of fuel. With respect to rolling stock, a total of 10,600 passenger cars, 4,160 must be repaired, and the repair shops, instead of the largest possible production, are making little progress. This is due not only to the difficulties which surround the transition from war to peace activities, but especially to labor conditions. Every effort is being made by the railroad administration to stimulate the activity of both the State and private shops, and in this connection a meeting was recently held at Rome to discuss the matter. This conference was attended by the government officials and by all the manufacturers of railway materials.

ADDITIONAL PASSENGER TRAINS

During the last months of the war, the total average mileage of passenger trains for the public was about 80,000 kilometers (49,710 miles) per day. This average has been gradually increased until 89,000 train kilometers (55,302 miles) was the average at the end of March, 1919, without including the service established on the lines of the recovered territory in Venito and in the Trentino and Julian Venezia. Beginning May 1, 1919, a further increase of 7,000 kilometers (4,350 miles) per day will be made by the provision of additional trains on the lines which need them the most, among which are included additional through trains on the Rome-Florence-Milan and Rome-Genoa-Turin routes.

Railway Supplies in Mexico

The Railway Business Association has issued in pamphlet form an article by P. Harvey Middleton, executive assistant of the association, on his recent trip to Mexico to investigate railway conditions in that country. The article parallels to an extent the two articles by Mr. Middleton in the *Railway Age* of last week and this week, respectively, and in addition is supplemented by an extended list of materials which are to be purchased by the Mexican Government Railways for the lines south of Mexico City. The list is given in great detail and includes a wide variety of supplies. Requisition numbers are added to facilitate its use by those who may desire to submit quotations.

The list in detail is as follows:

LIST OF MATERIALS REQUIRED BY RAILWAY LINES SOUTH OF MEXICO CITY

Quotations for these items will be requested either by Mr. Silviano Pruneda, Purchasing Agent, Estacion Buenavista, Ferrocarril Mexicano, Mexico, D. F. or by Mr. F. P. de Hoyos, General Agent, Mexican Government Railway Administration, Woolworth Building, New York.

Requisition numbers

1,000 car wheels, 33-in. diameter.....	AG-693, AC-2316
1,000 car wheels, 30-in., narrow gage.....	CE-75, AC-4163
2,000 car wheels, 33-in., standard gage.....	CE-75, AC-4163
6,500 tie plates.....	113-CV, AC-2751
Locomotive tires.....	AG-776, AC-2771
Locomotive tires.....	AG-778, AC-2772
Channels, plates, tank sheets.....	AG-824, AC-2773
Bars, bolts, clamps, drills.....	AG-830, AC-2797
Boiler flues.....	AG-886, AC-2860
2,000,000 sq. ft. pine.....	CE-75, AC-4163
1,000,000 sq. ft. oak.....	CE-75, AC-4163

1,000,000 sq. ft. miscellaneous lumber.....	CE-75, AC-4163
Locomotive tires.....	CE-75, AC-4163
Steel firebox plate.....	CE-75, AC-4163
Steel plates for tank cars.....	CE-75, AC-4163
Air gages.....	AG-331, AC-4152
80 60-gal. casks for water.....	628-CV, AC-4162
10 rolls wire and 250 kilos of nails.....	AG-370, AC-4132
10 tons lime.....	621-CV, AC-4123
5 tons lime.....	CV-519, AC-3761
10 tons lime.....	CE-75, AC-4163
*1,000,000 cross ties, standard gage.....	CE-75, AC-4163
*500,000 cross ties, narrow gage.....	CE-75, AC-4163
Accessories for Pintsch gas.....	AG-42, AC-183
100 pairs catches, deck sash, A. & W. Co., No. 35.....	AG-42, AC-183
20 kilos chalk white, lump.....	AG-42, AC-183
50 kilos cord, bell, hemp, 1/2-in.....	AG-42, AC-183
30 kilos rivets, deck sash, o. 3, A. & W.....	AG-42, AC-183
70 kilos rivets, tinned, iron, various sizes.....	AG-42, AC-183
76 gross screws flat head, brass, various sizes.....	AG-42, AC-183
6 wheel "Barnes" pipe cutters, No. 3.....	AG-42, AC-183
240 kilos wire, copper, soft drawn, various sizes.....	AG-42, AC-183
5 kilos wire, brass spring, 1/32-in.....	AG-42, AC-183
5 kilos wire, brass spring, No. 16.....	AG-42, AC-183
24 sheets asbestos millboard, 1/2-in. x 40-in. x 40-in.....	AG-42, AC-183
24 sheets asbestos millboard, sheets 1/2-in. thick, 40-in. wide.....	AG-42, AC-183
100 kilos asbestos rope, 1/2-in.....	AG-42, AC-183
24 pieces burners, acetylene, 1/4-in., Colonial No. 2.....	AG-42, AC-183
144 pieces burners, "Dual" No. 2.....	AG-42, AC-183
144 pieces burners, "Dual" No. 3.....	AG-42, AC-183
36 kilos carborundum.....	AG-42, AC-183
Carborundum wheels.....	AG-826, AC-2769
144 pieces gaskets lubricator, 3/8-in. hole, 1 1/8-in. diam., 4-ply.....	AG-42, AC-183
144 pieces gaskets lubricator, for Detroit No. 21, Bull.....	AG-42, AC-183
Eye Lubricator.....	AG-42, AC-183
Packing cloth insertion, various sizes.....	AG-42, AC-183
50 kilos putty, Commercial, in bladders.....	AG-42, AC-183
790 kilos, bolts, machines, various sizes.....	AG-42, AC-183
100 mts. chain, straight, link iron, 3/8-in.....	AG-42, AC-183
100 mts. chain, straight, link iron, 1 1/4-in.....	AG-42, AC-183
108 packages cotters spring, various sizes.....	AG-42, AC-183
2 kegs nuts, hexagon, tapped U. S. S., 1/4-in.....	AG-42, AC-183
2 kegs nuts, hexagon, tapped, 1 1/4-in.....	AG-42, AC-183
2 kegs nuts, square, tapped, 3/8-in.....	AG-42, AC-183
3 kegs rivets, cone-head, boiler burden, iron, 3/4-in. x 2-in.....	AG-42, AC-183
3 kegs rivets, cone-head, boiler burden, iron, 3/4-in. x 3 1/2-in.....	AG-42, AC-183
1 keg washers, cut, 3/8-in.....	AG-42, AC-183
1 keg washers, cut, 1/2-in.....	AG-42, AC-183
1 keg washers, cut, 3/4-in.....	AG-42, AC-183
1 keg washers, cut, 1-in.....	AG-42, AC-183
50 pieces bushings, 1/2-in. x 3/8-in.....	AG-42, AC-183
50 pieces bushings, 1-in. x 3/4-in.....	AG-42, AC-183
50 pieces couplings, reducing, 3/8-in. to 1/2-in.....	AG-42, AC-183
50 pieces couplings, reducing, 1/2-in. to 3/8-in.....	AG-42, AC-183
50 pieces couplings, reducing, 3/4-in. to 1/2-in.....	AG-42, AC-183
50 pieces couplings, wrot, 1/4-in.....	AG-42, AC-183
100 pieces couplings, wrot, 3/4-in.....	AG-42, AC-183
50 pieces couplings, wrot, 1 1/4-in.....	AG-42, AC-183
50 pieces elbows, malleable, beaded, 1/4-in.....	AG-42, AC-183
50 pieces couplings, wrot, 1-in.....	AG-42, AC-183
100 pieces elbows, malleable, beaded, 3/4-in.....	AG-42, AC-183
50 pieces pipe, wrot iron, 1-in.....	AG-42, AC-183
50 pieces couplings, wrot, 1 1/4-in.....	AG-42, AC-183
50 pieces pipe, wrot iron, 1 1/2-in.....	AG-42, AC-183
20 pieces pipe, wrot iron, 2-in.....	AG-42, AC-183
50 pieces plugs, cast for screw pipe, 1/2-in.....	AG-42, AC-183
25 pieces plugs, cast for screw pipe, 3/8-in.....	AG-42, AC-183
25 pieces plugs, cast for screw pipe, 3/4-in.....	AG-42, AC-183
25 pieces plugs, cast for screw pipe, 1/2-in.....	AG-42, AC-183
25 pieces plugs, cast for screw pipe, 1 1/4-in.....	AG-42, AC-183
50 pieces tees, malleable, beaded for screw pipe, 1/2-in.....	AG-42, AC-183
50 pieces tees, malleable, beaded for screw pipe, 3/8-in.....	AG-42, AC-183
50 pieces unions, common, malleable, 1/2-in.....	AG-42, AC-183
50 pieces unions, common, malleable, 3/4-in.....	AG-42, AC-183
50 pieces unions, common, malleable, 1 1/4-in.....	AG-42, AC-183
25 pieces unions, common, malleable, 1 1/2-in.....	AG-42, AC-183
10 pieces Globe valves, brass, screwed, 1/4-in.....	AG-42, AC-183
10 pieces Globe valves, brass, screwed, 3/8-in.....	AG-43, AC-183
10 pieces Globe valves, brass, screwed, 1/2-in.....	AG-42, AC-183
12 pieces Globe valves, brass, screwed, 3/4-in.....	AG-42, AC-183
12 pieces Globe valves, brass, screwed, 1-in.....	AG-32, AC-183
1 piece gage, steam locomotive, brass, 6 3/4-in., black drail, white figures, 300-lb. pressure.....	AG-42, AC-183
24 mts. tubing, copper, seamless, 3/8-in., O. D. 3/32-in. thick, 12 ft. 6 in. length.....	AG-42, AC-183
24 mts. tubing, copper, seamless, 2-in., O. D. 5/32-in. thick, 15 ft. length.....	AG-42, AC-183
24 mts. tubing, copper, seamless, 2 1/4-in., O. D. 1/8-in. thick, 12 ft. 6 in. length.....	AG-42, AC-183
50 lbs. Euchrelyptum.....	AG-42, AC-183
5 rolls gold leaf ribbon, XX, 1/2-in.....	AG-42, AC-183
5 rolls gold leaf ribbon, XX, 1 1/2-in.....	AG-42, AC-183
100 kilos plaster of paris.....	AG-42, AC-183
2 pieces crucibles, No. 80.....	AG-42, AC-183
50 sheets iron, planished, No. 22, U. S., sheets, 28-in. x 72-in.....	AG-42, AC-183
2 sheets lead, sheets 1/2-in.....	AG-42, AC-183
500 kilos steel angle, 3/4-in. x 3 1/4-in. x 3 1/4-in.....	AG-42, AC-183
500 kilos steel angle, 1/2-in. x 3 1/2-in. x 3 1/2-in.....	AG-42, AC-183
500 kilos steel angle, 1/2-in. x 3 3/4-in. x 3 3/4-in.....	AG-42, AC-183
500 kilos steel angle, 1/2-in. x 4-in. x 4-in.....	AG-42, AC-183
2 sheets steel fire box, sheet 1/8-in. x 52-in. x 92-in.....	AG-42, AC-183
1 sheet steel fire box, sheet 1/8-in. x 80-in. x 80-in.....	AG-42, AC-183
200 kilos steel, machine, round, 1/4-in.....	AG-42, AC-183
3,000 kilos steel, spring 3/8-in. x 7-in.....	AG-42, AC-183
1,000 kilos steel, spring, 1/2-in. x 7-in.....	AG-42, AC-183
4 sheets steel, tank, 1/32-in. x 48-in. x 120-in.....	AG-42, AC-183
6 sheets steel, tank, 1/8-in. x 48-in. x 120-in.....	AG-43, AC-183
6 sheets steel, tank, 1/8-in. x 48-in. x 120-in.....	AG-42, AC-183
6 sheets steel, tank, 1/8-in. x 48-in. x 240-in.....	AG-42, AC-183
400 pieces brake beams, R. H. Acme I. H.....	AG-42, AC-183
600 pieces flues, boiler, charcoal.....	AG-42, AC-183
123 wheels, cast iron, for freight cars.....	AG-42, AC-183
72 wheels, handcar.....	AG-309, AC-3945
16 sets taps, hand machinists, U. S. S.....	AG-42, AC-183
190 pieces pneumatic material.....	AG-42, AC-183
20 taps, patch bolts.....	AG-42, AC-183
60 mts. burlap.....	AG-42, AC-183

3 rolls canvas.....	AG-42, AC-183
80 kilos hair, curled F. M. Black, grade of Armour Curled Hair Works.....	AG-42, AC-183
100 ft. plush, quality "E," red.....	AG-42, AC-183
100 pieces lamps, incandescent.....	AG-42, AC-183
10,000 pairs baggage checks.....	518-CV, AC-3778
2,480 pairs tieplates.....	155-AC, 3784
850 chisel points.....	AG-543, AC-2008
200 separators for accumulators.....	AG-297, AC-1145
10 tons babbitt metal.....	AG-312, AC-3948
100,000 car seals.....	AG-328, AC-4010
500 towels for Pullman.....	CD-46, AC-4005
3 tons antimony.....	AG-358, AC-4058
15,300 hose for air brake.....	AG-279, AC-3817
3,150 hose for air brake.....	AG-360, AC-4063
5,000 partitions.....	610-CV, AC-4064
20,000 kilos of lime.....	610-CV, AC-4064
500 kilos of borax.....	AG-338, AC-4079
50 water barrels.....	AG-359, AC-4059
Picks, bars, jacks, etc.....	363, AC-4062
300 boxes of carbide.....	AG-349, AC-4037
Tubes, rods and valves.....	169, AC-4048
Electrical material.....	AG-368, AC-4131
52 manometers.....	AG-330, AC-4151
13 windows various sizes.....	589-VC, AC-4025
15,000 incandescent lamps.....	AG-261, AC-3742
854 Pac. burners, 5 barrels of globes.....	AG-211, AC-3681
2,100 pieces pipe, screw, lap welded.....	AG-210, AC-3680
50 cases pure turpentine.....	AG-379, AC-4142
Adzes, axes and handles.....	AG-346, AC-4003
Narrow gage freight cars.....	78-CV, AC-2653
Blocks and tackle.....	AG-793
24 tires, 5 1/2-in. wide, rough rolled, 43 3/8-in.....	AG-596, AC-2179
700 galvanized plates.....	AG-47, AC-3232
50 pieces brake beam heads.....	AG-181, AC-3589
45 window glasses of various sizes.....	451-CV, AC-3523
20 machetes.....	179-AG, 4130
American yellow pine, various sizes.....	AG-895, AC-2961
Bengal lights and torpedoes.....	AG-41, AC-3226
50 levels.....	AG-182, AC-3390
Electric lanterns.....	AG-653, AC-2355
48 rules of interchange books.....	38-LA, AC-2720
Stationery.....	607-CV, AC-4077
Transparent curtains.....	171-AC, 3980
Padlocks.....	AG-344, AC-4001
Wire netting.....	AG-314, AC-4006
380 pieces steel spring.....	AG-336, AC-4013

*Ties are usually bought in the Mexican market.

Quotations are also required for air brake equipment and tank cars. All material for repair of locomotives and cars must be in accordance with the specifications of Master Car Builders. Competitive bids are obtained and ordered are placed on basis of quality as well as price.

Return of Brigadier General Atterbury

BRIGADIER GENERAL WILLIAM W. ATTERBURY arrived at Hoboken, N. J., from France on May 31, and was at once discharged from the army; after a short vacation he will resume his duties as vice-president of the Pennsylvania Railroad.

General Atterbury wears three decorations, the Distinguished Service Medal of the United States Army, the French Legion of Honor, and the British Order of the Companion of the Bath. With him on his return were the following members of his staff: Captain J. A. Appleton, formerly yardmaster at West Philadelphia; Captain J. V. Reath, formerly secretary to Mr. Atterbury as vice-president of the Pennsylvania Railroad; Lieutenant W. H. Myers; A. J. Bonsall, and R. E. Nichols. Captain Appleton was general superintendent at Gievres; Captain Reath was adjutant general, and Lieutenant Myers was the representative of the transportation corps at Angiers.

In a brief review of his experience of 21 months in France, General Atterbury said:

It was perfectly clear from the very outset that, to take care of the tonnage the A. E. F. would bring into France, it would be necessary to utilize to the maximum every berthage accommodation not already in use and that in addition to all of this it would be necessary to provide new port facilities; and the splendid dock project at what we called American Basens, just outside of Bordeaux, was undertaken and carried out to completion. Here was erected out of the mud bank of the Garonne river a modern ten-berth dock, with 40 electric gantry cranes. This project constitutes one of the distinctive achievements of the A. E. F. in France.

The personnel on the French railroads when America entered the war was becoming serious. By reason of the war, there was no source of supply from which could be recruited an adequate number of suitable employees, the strain of three

years of work under war conditions was telling on the men, and the calibre of the personnel on an average was not so high as in peace times. The A. E. F. had to provide transportation forces commensurate with the added burden which it placed upon the French railroads, and, in addition, such supplemental forces in the way of car and locomotive repairmen, track men, etc., as could be brought over from the States consistent with the requirements of the combatant troop program. In equipment, likewise, the French had reached a rather serious stage when the Americans began to arrive in France. A considerable percentage of the cars and engines had been captured by the Germans in the big drive at the beginning of the war, and an excessive number of bad-order cars and locomotives had accumulated. One of the first steps taken on behalf of the A. E. F. was to send to France experienced car and locomotive repair forces. A car-erecting plant was built at La Rochelle, to take care of cars coming in a knocked-down condition from the States, and for a locomotive-erecting plant at St. Nazaire to take care of knocked-down locomotives arriving at that port.

In addition, the plan was developed of having locomotives sent to us from the States in a practically completed state on special ships, thus involving but little work in assembling when they reached us, and, what was much more important, relieving the port of St. Nazaire to that extent, as we could take care of the partially erected locomotives at Brest. Throughout the war the car and locomotive situation was one of the vital factors entering into the conduct of combatant operations. There never was a time when it was not essential to produce the greatest practicable efficiency out of the equipment available. To give an idea of what the program to have 4,000,000 men in France by the Summer of 1919 meant, it may be stated that we were arranging to have in France by that time 4,000 locomotives and 98,000 cars. To supply an army of that size we were planning for the reception and discharge of 101,000 tons of cargo per day at the ports. The condition of the French railroads when I reached France in September, 1917, was surprisingly good, considering the fact that they had been operating more than three years under war conditions, that no new rail had been laid within that time, and that the force they had been able to keep on maintenance of way was practically negligible. For the manner in which the French railroads met the requirements of the Allied Armies I have nothing but the highest commendation. At no time was there the semblance of a breakdown in the transportation machinery of the country, despite the great overload placed upon it, and the results achieved are a splendid tribute to the efforts of the French transportation authorities.

To expand adequately the capacity of the French railroads involved the planning and construction of immense storage yards and additional engine houses; the laying of supplemental tracks, the rearranging and extension of existing tracks and, in general, everything that goes into the enlargement and expansion of a railroad to meet greater needs. Behind each of the main ports we had stupendous storage layouts; then we had what we called our intermediate storage—about midway between the ports and the army zone—and then came our storage developments in the Advance Section.

Several of these yards are the largest in the world and in general they represent the last word in modern yard construction. The plans for the development at Gievres called for 264 miles of track, 1,152 turnouts, 4,410,000 square feet of covered storage and 10,387,000 square feet of open storage. At the time of the armistice 132 miles of track, 3,552,000 square feet of covered storage and 6,000,000 square feet of open storage had been completed. The project covers an area of 2,600 acres.

It is hardly necessary to say much about the performance

of the Army Transport Service in France, which is a branch of the Transportation Corps, because I think the performance of that department has spoken for itself and that its achievements are perhaps the best known of any of the branches of the Transportation Corps. It may be interesting, however, to state that we hope to reach the figure of 340,000 as the number of Americans shipped back to the United States during the month of May, as compared with the record figure of approximately 312,000 reached in September, 1918, in connection with the movement of troops to France. The Transportation Corps as authorized provides for 6,000 officers and 200,000 soldiers. This was the force we figured would be needed properly to meet the requirements of an American Army in France of 4,000,000. At the time of the armistice we had in the corps 1,810 officers and 46,976 soldiers.

I cannot speak too highly of the work of our transportation men in France. No body of men worked harder or more industriously and no body of men is entitled to greater credit. In the Corps we had some of the leading railroad and shipping men of America. These men came to France at great personal sacrifice, and in the development of the organization of the Corps worked more strenuously than they had ever done before in their lives. I have never seen a more hearty spirit of co-operation than that manifested by these officers in the carrying out of the assignments that fell to their lot in the army life, and there is nothing of which I am more proud than to have been associated with them in the work in France.

Our relations with the French and the British were of the most pleasant and harmonious character. They made it perfectly clear right from the start that they were at all times at our service for the benefit of any advice or suggestions they might be able to offer by reason of their longer experience in the war, and we availed of their assistance to great advantage. This spirit prevailed not alone in connection with the respective staff organizations, but extended throughout the entire working of our transportation relationship. In addition they rendered us valuable service in connection with the loan of facilities at times when, pending the provision of our own, we otherwise should have been greatly handicapped.

Note From "Rails and Sails"

General Atterbury's departure from France on May 21 was the occasion of a notice in *Rails and Sails*, the service periodical published by army men, which said in part:

"With this issue *Rails and Sails*, on behalf of the officers and men of the Transportation Corps, takes leave of Brigadier General W. W. Atterbury, Director General of Transportation. . . . It is given to few men to step out of civil life and become immediately one of the important leaders of a great army in an epoch-making struggle of the world and to become one of the most prominent figures in the preservation of civilization. To do this and to perform the task ably and adequately is the severest test that can come to any American. General Atterbury met this test successfully and performed the task set for him in a manner to win the highest encomiums of his own Commander-in-Chief and of the great leaders of the Allied Armies. He has won the esteem of his brothers-in-arms and of his subordinates. The name of Atterbury will be linked with that of Pershing as the name of Knox is linked with that of Washington and Scott with that of Grant. General Atterbury's return to civil life means the severing of an official tie that easily became a personal one. It is a great thing to be a soldier and a great thing to be a military leader, but the greatest thing of all is to be a kind, able and patriotic civilian. When General Atterbury takes off khaki and puts on the garb of a plain American he will be uniforming himself for even greater tasks. Vale, duce magno! Ave, civitate majore!"

Short Line Problems Discussed at Washington

Demand Adequate Rates and Fair Divisions, Also Special Provision in Appropriation Bill

THE TROUBLES AND PROBLEMS of the short line railroads as well as the situation confronting the railroads generally were discussed at a meeting of about 200 short line railroad officers, which was attended also by a number of officers of the larger roads, held at Washington on Tuesday, Wednesday and Thursday of this week at the call of the American Short Line Railroad Association. Bird M. Robinson, president of the association, presided, and addresses were made by John J. Esch, chairman, and Thetus W. Sims, former chairman of the House committee on interstate and foreign commerce; Walker D. Hines, director general of railroads; Senator Oscar A. Underwood of the Senate committee on interstate commerce; H. C. Hall of the Interstate Commerce Commission; T. De Witt Cuyler, chairman, and Alfred P. Thom, counsel, of the Association of Railway Executives, and others, after which the delegates present considered the particular problems of the short lines informally with a view to adopting a plan of action.

President Robinson's Address

President Robinson in his address said in part:

The condition now confronting the rail transportation companies of the country, especially the short line railroads, is not only distressing but appalling. That deplorable condition is chargeable almost wholly to agencies and influences beyond their control, and it demands the undivided attention of all concerned. The return of the railroads on January 1 accentuates the necessity for Congress to act before that time, and the serious condition confronting the roads makes it imperative that the laws to be enacted must be helpful and constructive. That can be accomplished only in one way, and that is for the people engaged in the business to aid the Senators and Representatives in arriving at correct conclusions. The acute situation confronting us not only justifies but demands that delegates to this meeting carefully consider all questions involved, for the subject cannot be dealt with from the limited point of the short lines only, and decide upon what should be done for the good of all concerned, after which the delegates can and should confer fully with their respective Senators and Representatives and give them accurate, intelligent and necessary information so as to aid them in enacting a law that will protect the transportation business and at the same time properly safeguard the interest of the public.

As a war measure, the government took actual possession of all of the main line railroads, and a part of the short lines, at the beginning of 1918, and it is now operating such lines, leaving the balance of the roads to battle with the constantly rising tide of adverse and ruinous conditions, most of which are caused by government regulation and restrictions, and as a direct result of the operation by the government of a part of the lines.

In view of all of the facts we must recognize that the government is the all overshadowing and all dominant power with which the owners of the railroads must deal in the future. Under the circumstances, we have deemed it wise to ask some of the leading government officials to appear before this meeting and present their views as to what should be done with your properties. Our invitations have been accepted, and you are therefore to have the pleasure of hearing from representatives from each of the three branches of the government having to do with the control and operation of our rail transportation system.

We realize that the short line railroads cannot hope to be prosperous if the main lines are not in that condition, and for that reason we should do all that we can to induce the government to relax its strangling hold upon all roads and permit them to proceed with their business in an orderly and profitable way. In view of the fact that we must take into consideration the condition of the main line roads, we have extended an invitation to the members of the Association of Railway Executives, and to members of the National Association of Owners of Railroad Securities to be present at this meeting and participate in its proceedings.

We find from investigation that members of Congress are somewhat confused by the great variety of suggestions and plans that have been offered, and there is considerable comment, some of it critical, over the fact that the people interested in the railroads do not agree among themselves as to what should be done, and we feel that there is justification for that criticism. We fear that that condition, if not corrected, will result in one of two things—either that Congress will finally do nothing more than adopt a few amendments to the existing interstate commerce act, in other words, do some patch work, or that it will enact some radical legislation that will be detrimental, possibly seriously so, to the railroads and their owners, and to the public as well.

We feel that the people interested in rail transportation business should make every effort to harmonize their different points of view, and join in presenting to Congress suggestions for constructive, helpful legislation.

The President, by his proclamation, and the director general, by notices served by wire, took over all of the railroads, including the short lines. Subsequently, it was announced in behalf of the director general that he did not intend to take over to retain practically all of the short lines.

Congress, in the federal control act, definitely included the independently owned and operated short line railroads engaged in public transportation, and thereupon the administration announced that it would exercise, what we regarded as a very doubtful authority contained in the act, and relinquish practically all of the short lines. Thereupon Congress passed a joint resolution, definitely including under government control the short lines involved, but while that joint resolution was being considered, the administration hastily issued letters, giving notice that the respective roads had been relinquished from government control.

President Wilson, on July 11, 1918, vetoed the joint resolution and said in his message to Congress:

"I quite agree that practically all of these should be retained and that they should not only be retained, but that they should be accorded a fair division of joint rates—a fairer division than some of them have been accorded hitherto—an equitable allotment of cars, and motive power, and fair routing arrangements."

That promise has not been met, either in letter or spirit. Director General McAdoo openly and notoriously disregarded it in every way, and his administration not only did not give a fair division of joint rates, allotments of cars and motive power and fair routing arrangements, but he actually and ruthlessly took from the short lines practically all of their competitive business and attempted to decrease their divisions.

We finally succeeded, after months of effort, in inducing Director General McAdoo to agree upon a standard form of contract which the government was to make with the short

lines, but we found it most difficult to induce the administration to actually make the contracts with the individual lines. The policy pursued was to procrastinate, and when a contract was made, to limit the benefits that would go to the short line making it. In every case presented in which any substantial benefit would move to the respective short lines, the administration would in some way and for some reason decline to enter into the contract. In the meantime, it continued the practice of diverting the competitive business, of forcing up the wages of employees, in increasing the prices of cross ties and other material produced on the short lines, and in many other ways inflicting heavy losses without giving any consideration or benefit in return.

Director General Hines has exhibited a much more considerate and favorable disposition towards the short lines, but when he came into office the die was cast. The assistants and employees, especially a large part of the traffic and operating officials, located in various parts of the country, had had instilled into them the belief that the rights of the short lines were to be disregarded, and while Director General Hines no doubt desires to correct that situation, he has not taken hold of it in that vigorous way which is necessary to reverse all that has been done.

It has become apparent that former employees of several of the main line companies, now the representatives of the Railroad Administration in the various sections, are constantly and effectively diverting the business of the short lines and taking from them their just and equitable rights. In fact, some of us are convinced that there is a conspiracy to so cripple the short lines at this time as to render them helpless, if not to make them bankrupt. We have called attention of the administration to this apparent combination, but unfortunately have not succeeded in inducing them to stop such activities. It is quite apparent that a large part of the administration's traffic and operating officials in the various sections of the country are secretly but certainly working for the future good and protection of the companies with which they were formerly respectively connected, and with which most of them expect to become re-associated after the roads are returned to their owners, hence the incentive to absorb all things possible from the short lines and possibly others.

The lot of the short line railroads, which aggregate about 35,000 miles, has been a sad one. As a rule, the owners were encouraged to construct them by the connecting main line, and especially by the communities which they penetrate, and as a rule the connecting lines promised to co-operate with and aid them, supplying cars free of charge, and promising adequate divisions of joint rates. Unfortunately, those promises have, to a large extent, not been fulfilled, notwithstanding the large volume of business produced by such lines and the great service rendered to the people on the line.

The states in which these roads were built frequently made alluring promises, and in most cases promptly after the road was completed sought to reduce charges for services rendered to the lowest possible amount. As a result of these two factors, many of the short lines have been prevented from becoming a financial success. In other words, they were not permitted to earn sufficient to make an adequate return to the capital invested, and they were thereupon thrown into bankruptcy and condemned as failures. In fact, it is frequently said that a particular line "ought never to have been built," and that reason is assigned why the respective line shall not be permitted to increase its charges and divisions.

If present conditions are to be the standard by which we are to measure the propriety of the construction and efforts in the past, we will be forced to condemn the establishment of a large number of business enterprises that have not succeeded to the extent expected, and must recognize that a large numbers of the Senators, Representatives, members of state

legislatures, as well as a large part of the government officials, ought never to have been elected. That standard will also force us to recognize that a large part of the legislation affecting railroads and other lines of business ought never to have been passed.

We must deal with existing conditions and recognize that the people who have constructed the short line railroads must be permitted to charge a sufficient amount for the services rendered and must receive out of the joint rates such a division as will enable them to conduct the business and have a reasonable return on the funds invested, or if they are not to have such a right they must be accorded the privilege of removing the rails and recover the funds invested as far as that is possible.

The right to remove railroads of that character is universally contested on the ground that the people in the various communities are vested with certain rights. In weighing the two rights involved, the government should recognize the fact that as a rule those roads penetrate undeveloped sections where the value of property is low and the coming of the road instantly causes a very substantial advance in values. In the event the railroad is not permitted to earn a living, the owners should be permitted to remove it, and the local citizens will, to all intents and purposes, be restored to their former status.

Justice demands that rates and divisions of these lines shall be such as to enable them to live, or that they shall be permitted to discontinue the business and remove the property.

Competitive conditions are such that the interline or joint rates from points on the short lines to points beyond cannot, as a rule, exceed the rates from points on the connecting lines in that district or zone. If the rates from such short line points are higher, it will decrease the volume, if it does not prevent the movement of the traffic. These conditions make it necessary that the short line roads shall be accorded a very substantial proportion of the joint rate. In fact, the short lines must at once receive from the government a very substantial increase in the divisions. That increase should in some instances run at least 100 per cent, and possibly more, to enable the respective lines to meet the greatly increased burdens and losses that have been incurred as the direct result of the illegal act of the Railroad Administration in excluding them from federal control, and because of the rank injustice inflicted in the operation of the main lines by the administration.

Congress will, without doubt, pass an act prior to July 1 appropriating for the Railroad Administration, from one billion to one billion two hundred million dollars for the purpose of paying the amount due the roads under federal control and meeting other obligations. The owners and officers of the short lines should immediately present to Congress full information as to the unjust treatment that has been administered to them. They should show the losses that have been incurred and that the administration is not only continuing to divert their business, but is resolutely refusing to give them adequate and necessary divisions of the joint rates. Without any attempt to be vindictive, these representatives of the short lines should show that they are being deliberately deprived of their just rights, hence should urge and insist that Congress allocate and set aside at least \$50,000,000 of its appropriation to be used exclusively in adjusting and paying to the short lines the amount legally and equitably due them.

We should insist that Congress, in that appropriation act, shall include mandatory instructions to the Interstate Commerce Commission to immediately take into consideration the existing status of the short line railroads, the injury and injustice done them as a result of the government control of certain lines, and that said commission, without delay, authorize and direct in such cases as may be brought before them, such increase of the division of joint rates as will

enable said lines to meet the losses that have been incurred, to render adequate transportation facilities to communities served and to receive such reasonable returns on the investment therein as the commission may determine; the instructions to the commission to include directions to make the increased divisions effective as of such date prior to January 1, 1919, as the condition of the respective line may require.

The owners and operators of the short lines should give prompt and great consideration to the various propositions now pending before the interstate commerce committees of Congress. They should aid in the preparation and securing the adoption of helpful, beneficial legislation for the transportation systems at large, and they should give special attention to the provisions in the proposed law affecting the rights of the short lines.

The permanent legislation to be enacted must contain definite provisions conferring upon the Interstate Commerce Commission not only the power but the duty of determining the proportion of joint rates going to the respective short lines. The act should provide that the commission must act promptly, in the event the lines interested do not agree as between themselves, and that it shall award to the short lines such increase of the divisions of joint rates as will enable said lines to meet their expenses, render adequate transportation facilities to the communities served, and receive just compensation for the use of their property.

We should recognize that the entire transportation system of the country should be placed in a healthy condition; that the main lines should receive rates sufficient to meet all of their legitimate expenses, including the necessary liberal divisions to short lines, and an amount sufficient to meet all other charges, including an adequate return on their properties. The time is opportune. The very seriousness of the present situation is our strength, hence let us take counsel together. Let us determine what will be fair and just, and then go forth and fight until we win.

Other Addresses

Mr. Esch discussed his bill to provide for the regulation of the railroads after their return by the government, which he said is not a perfected bill, but represents an effort to crystallize public opinion along definite lines. His statement that the bill does not propose a government guarantee elicited applause. Mr. Esch said he believed a plan of guaranteeing a fixed return would inevitably lead to government ownership, and that the railroads should be allowed to work out their own destiny, under proper regulation but without shackles. He also opposed the idea of a regional consolidation of railroads, saying he wished to preserve competition and the enterprise and initiative that have made the American railroads the greatest in the world, and the idea of a secretary of transportation, because such a plan, he said, would be too susceptible of political influence. Mr. Esch said that it was his opinion, and he thought it was the intention of Congress, that the short line railroads should have been included in the system under federal operation.

Mr. Sims, chairman of the House committee during the last Congress, said he did not believe any of the proposed plans for dealing with the railroads would be unaccompanied by difficulties in operation. He thought the completion of the commission's valuation of the railroads would be of great value in the solution of the problem, but he was afraid that the constant increase of value due to the growth of communities would lead to constantly higher rates, and said that if that is going to happen it may be necessary for the government to buy the right of way and terminals and lease them to companies for operation. Mr. Sims said the short lines were "short on mileage but long on political influence"; he told of his unsuccessful efforts to get the joint resolution intended to prevent the relinquishment of the short lines passed last June in time to head off the order of relinquishment.

Director General Hines discussed his ideas for a permanent solution of the railroad problem by consolidating the railroads into a few competing systems, made up of strong and weak roads and providing some workable standard of what railroad regulation ought to produce so that each company could have rates that would enable it to earn a designated return on an official valuation and an additional amount to be put back into the property without capitalization, any excess earnings to be divided between the company and the government. He said he believed increased costs have come to stay, and that unless some such plan is worked out it will become more and more difficult for the roads to get along. It is most important, he said, that the problem be promptly dealt with because general business conditions are suffering until it is settled, because the government is not in position to put large amounts of money into improvements that cannot be completed for several years, and the railroad corporations are not in a position to furnish large amounts of capital till they know where they are coming out. Mr. Hines said that his thought was that the short lines should be provided for and should be included in the general plan of consolidation.

Senator Underwood declared that the proper solution of the railroad question represented the most important problem now before the country after the conclusion of the peace treaty. He said that while surface conditions indicate prosperity in the country no permanent business prosperity can be expected when there is no demand for builders' supplies, and at the present time there are idle furnaces, idle factories and idle freight cars. The war industry has been demobilized, but the peace industry is not yet mobilized, and we are being carried by confidence and credit which alone cannot last long. There must be a remobilization of peace industry or disaster will lie in our path. Business cannot function in the future with its hands tied and business is waiting for Congress to take the wartime shackles from its hands. The railroad problem, he said, goes into every business office in America. The value of their securities is uncertain, and the railroads cannot consume builders' supplies when they have no credit. Business is slowed down until this great problem is solved. He felt confident that Congress has the ability and the judgment to solve the problem if the people will give it a chance, but the job will be done better if rocks are not thrown at it while it is engaged on the task. The key to the arch, he said, is the financial situation. When that is solved the other problems take care of themselves. The railroads must have an earning capacity not only sufficient to take care of the existing capital, but to attract new capital for development, and no one can make that possible but the government. He thought the people had never been in a better humor to do the right thing by the railroads than now, but that the railroads must make some concessions, and one of them is the speculative profit.

Mr. Cuyler said the railroads ought to go back to private management very much as before, so far as corporate organization is concerned, and as untrammelled as is possible consistent with proper regulation. The railroads do not expect to return to former conditions without change, he said, but the shackles should be broken and cast aside, and they should have greater authority for consolidation and coordinated action and a rule of rate-making that will place it beyond peradventure that rates shall be sufficient to meet the wages and the costs of operation and maintenance. He believed that such a rule could be enacted without a government guarantee. He said the federal government should supervise the issuance of securities and that all necessary regulation should be provided for.

"There never was a more mistaken idea," Mr. Cuyler said, "than that the railroads broke down of their own inertia. They were given the wrong kind of medicine by way of regulations, and if the proper medicine is applied the patient

will become stronger than ever. I believe the American people are going to insist on the preservation of private initiative and ownership and public protection for private ownership."

Mr. Cuyler and Mr. Thom both expressed a desire to bring about complete co-operation between the big companies and the short lines, saying that the fundamental problems are the same.

The session on Wednesday afternoon was addressed by S. Davies Warfield, president, and Luther M. Walter, general counsel, of the National Association of Owners of Railroad Securities, and by Commissioner H. C. Hall, of the Interstate Commerce Commission.

Mr. Warfield and Mr. Walter explained the terms of the Warfield plan for future railroad regulation and showed in what manner it would prove of benefit to the short lines. Both expressed their confidence in the Interstate Commerce Commission and pointed out that its work would no doubt be assisted by a definite directory principle established by Congress as to rates and the return allowed under them. They explained how the provision in the Warfield plan for rates sufficient to give a 6 per cent return on the property investment as a whole combined with the division of earnings in excess of that amount on the part of the larger roads would on the one hand provide sufficient return for all roads and on the other provide also for a similar return for the smaller and short line roads. They also pointed out the advantages that might accrue from the provisions of the plan in the way of supplying equipment, in securing proper divisions of interline rates, in unification of terminals, etc.

In bringing to the attention of the meeting the salient principles of the Esch-Pomerene Bill introduced in both houses of Congress on Monday, Commissioner Hall said that it represented the views of the commission and was felt to be the best plan offered because it was simplest. It would require the least amount of charge and gave the best opportunity to use forces of regulation already in existence. He sketched briefly the progress towards the provisions embodied in the bill and spent some time in pointing out the advantages in it from the standpoint of the short lines.

Mr. Hall spoke at some length concerning the lessons derived from the war and showed how an attempt had been made to embody them in the proposed bill. "I am not among those," he said, "who believe that the Railroads' War Board was a failure," and added that in his opinion the War Board accomplished more than the railroads had ever accomplished in this or in any other country. It was handicapped by laws meant to discourage exactly the unification it was trying to bring about. Also he said that he took part in the preparation of the report of the Commission to the President relative to the control of the railroads during the war, but that he had had no idea of segregating the short lines.

Among the advantages he thought would accrue to the short lines through the proposed bill, Mr. Hall instanced the provision relative to the Commission's authority over divisions of interline rates; the equal opportunity the act will offer to every carrier "to earn its own living," the provision that consolidations of roads, joint use of terminals, pooling of tonnage, etc., would be under the control of the Commission. "If I interpret this right," he said, "this would mean that the short lines cannot be starved down and then become absorbed at a price the absorber road chooses to pay."

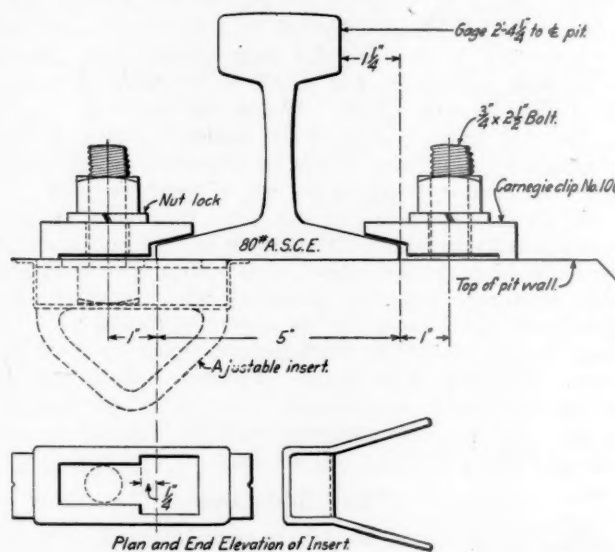
The meeting gave a rising vote of confidence in the Commerce Commission.

In the general discussion the short line officers had a good deal of complaint to make of their treatment by the government and the Railroad Administration and considerable satisfaction was expressed at the prospect of a termination of federal control. Some placed the blame on the officers of the trunk lines and some on the government. An officer of a California line said that on most of the rates the big lines had

not allowed him any part of the increase in rates ordered last year. A number of resolutions were expected to be introduced and acted upon at the session on Thursday.

Use of Bolt Inserts for Rail Fastenings in Roundhouse

THE FASTENING of rails to the walls of track pits in the new roundhouse of the Toledo & Ohio Central at Columbus, Ohio, was accomplished in an effective manner by the use of bolt inserts embedded in the tops of the concrete walls. Instead of embedding timber blocks in the walls to which the rails could be spiked in the ordinary manner or embedding bolts head down, direct in the concrete, metal inserts were used as shown in the drawing. These inserts are essentially metal boxes containing a receptacle for a bolt head with



Details of the Bolt Insert and Manner of Application

a suitable slot for inserting the bolt and with wings extending into the concrete for the necessary anchorage. The particular advantage of this method of fastening the rails lies in the fact that the bolts may be renewed whenever damaged by a derailment or otherwise. The inserts are made by the Truscon Steel Company, Detroit, Mich., and were placed in pairs as indicated in the drawing, the pairs being spaced 4 ft. center to center along the pit walls.



Central News Photo

The Railway Station at Soroka, an Allied Base on the Murmanesk Archangel Railway

Doings of the United States Railroad Administration

Director General Hines and Staff Now on Inspection Trip; Prospects of Additional Rail Orders

DIRECTOR GENERAL HINES and members of his staff left Washington on Thursday for another inspection and speaking trip, via the New York, New Haven & Hartford to Boston, the Boston & Albany to Albany, the New York Central to Chicago, the Rock Island to Denver, the Burlington back to St. Louis, the Illinois Central to Birmingham, and the Seaboard Air Line from Birmingham back to Washington. Mr. Hines expected to return to Washington on June 14.

Accounting Circulars

On the ground that federal control constitutes all railroads operated by the government as a single system the Division of Accounting, in Accounting Circular 94, directs that the assessment and collection of war taxes on shipments of company material transported by one carrier under federal control for another carrier under federal control shall be discontinued at once. If it is decided that this rule shall be made retroactive further instructions will be issued.

Accounting Circular 88 (revised) cancels P. S. & A. Circular 33 prescribing rules for the settlement of per diem between railroads under federal control and roads not under federal control and directs that the rules prescribed in Circular C. S. 59 issued by the Car Service Section, effective May 1, shall be followed.

Rate Advance Possible

The possibility of an advance in rates was again discussed by Director General Hines when he appeared before the appropriations committee of the House on Tuesday to explain the need for a \$1,200,000,000 appropriation, but he said he was not ready to decide the question until the conditions to be expected of the latter part of the year are more definitely known. Mr. Hines pointed out, however, that rates are relatively very low because the percentage of increase made last year was much less than the percentage of increase in expenses and in the prices of wages and commodities generally and that the government is merely protecting the public against the higher prices that would result from an increase in rates. He showed that during the first four months of this year wages were 50 or 52 per cent higher than in the corresponding period of 1917, but declared that a similar situation existed in most industries, and that the costs of materials and supplies have increased from 55 to 70 per cent. He felt, however, that if a decision to advance rates were reached now the amount might either be made too high or too low, which would require still another advance and, therefore, the decision should be deferred. Mr. Hines also appeared before the committee on Wednesday.

Freight Traffic Movement and Car

Performance for April

The volume of freight traffic showed an even greater decline in April than in March, according to the monthly report of freight traffic movement and car performance compiled by the Operating Statistics Section. The net ton miles of revenue and non-revenue freight amounted to 28,629,739,000, a decrease of 24.6 per cent. The net ton miles per mile of road per day were 4,134, as compared with 5,471 in April, 1918. Train miles decreased 23.4 per cent; car miles decreased 19.1 per cent. The average number of freight cars on line daily

WASHINGTON, D. C.
was 2,445,731, a decrease of 2 per cent. Of these 2,288,988 were reported as serviceable, the percentage of unserviceable cars being 6.4 per cent, as compared with 5.2 per cent. The report shows clearly that with the reduction in traffic the loading of cars and trains is being decreased. The net ton miles per train mile (tons per train) averaged 674, as compared with 685 in April, 1918, a decrease of 1.6 per cent. The net ton miles per loaded car mile also show a decrease, from 29.3 to 27.3, or 6.8 per cent. The percentage of loaded to total car miles was 68.1, as against 68 last year. The average miles per car per day also show a decrease, from 25.5 to 21.1, a loss of 17.6 per cent, and the net ton miles per car day in April averaged 390 against 507, a decrease of 23.1 per cent.

Policy of the Railroad Administration

as to Public Improvements

Walker D. Hines, director general of railroads, has sent the following letter to the regional directors respecting relations with public bodies as to public projects resulting in charges to capital account, or in charges to operating expenses in connection with capital expenditures; or with respect to taxes and assessments:

"The Railroad Administration is disposed in favor of the resumption or development of public works and improvements. In cases where the only objection thereto is to the present comparative cost of labor and material, no protest will be made on behalf of the Railroad Administration. Even where the burden upon the Railroad Administration in a particular district would be relatively a large part of the total cost, the mere difference between the cost of work being done now and being done somewhat later is not sufficient to justify an attitude of opposition by the Railroad Administration to a policy of resumption or prosecution of public works.

"The Railroad Administration should not identify itself with opposition to proposals looking to such development or resumption of public works unless the case is exceptional and it is clear that the expenditure will be improvident, or that the project is actually in a private interest and involves the public interest only to a slight degree and the private interest involved will not assume the expense of the work. Nothing herein shall be construed to relate to facilities covered by General Order No. 15.

"Representatives of the Railroad Administration should at all times make it clear to the public authorities that responsibility for capital expenditures rests upon the railroad corporations and not upon the Railroad Administration, and unless specifically authorized by the Division of Law, shall speak only for the Railroad Administration in proceedings before public service or state railroad commissions, or officials of cities, counties or municipalities.

"The Railroad Administration may use its moral suasion to get the railroad corporations to consent to go ahead with public improvements and to finance improvements. However, no federal administration officer should take any action or make any committal, the effect of which would be to deprive a corporation of an opportunity to present its objection to the expenditure.

"In view of the fact that the amount of money available for capital expenditures is always limited, if a project will not be beneficial to the public in proportion to the expense, or can better be postponed pending the completion of more im-

portant capital expenditures, the railroad corporation, which will have to supply the capital, should present the conditions to the proper authorities.

Bond Issues or Special Assessments.—"Railroad administration officials will not take any action for or against any proceeding, the purpose of which is to authorize a bond issue or special assessment, but will as fully as practicable keep the corporate officer of each interested railroad advised so that if the corporation desires to take any action, it may do so.

"In cases involving a special assessment chargeable to capital account in which the corporation does not make financial arrangements to pay the assessment, there is no obligation upon the director general to furnish the money. In such case the question is one between the public authorities and the railroad corporation.

Projects Which Involve Charges to Capital Account that the Corporation Agrees to Assume, But Which Also Involve Charges to Operation.—"If such a project is agreed to between the corporation and the public body and the financial arrangements have been satisfactorily disposed of, the Railroad Administration will assume, as to operating expenses, the amount properly chargeable to it, but this policy should not prevent the federal officer from presenting the objections, if any, which may develop to the project from an operating standpoint, nor from designating, wherever possible, the most economical method of carrying out any such project whenever there is more than one way of providing the proposed facility, or improving the existing facility, or from designating a better method of reaching the result if there is one available.

Discussions With, or Proceedings Before, Public Service or State Railroad Commissions, or Officials of States, Counties or Municipalities.—"The general practices in connection with negotiations with, or before such public authorities preceding the issuance of an order, either formal or informal, should be along the following lines:

"(a) Immediately upon receiving notice that any question affecting capital expenditures is to be taken up, notice should be given as information, to the proper officer of the corporation so that the corporation may participate in the consideration or hearing before the public authority, and where such projects involve the consideration of existing franchises or charters, unusual care in protecting the rights of the corporation, to notice should be exercised.

"The United States Railroad Administration representatives should assure themselves that the public authorities have given the corporation the notice required by law.

"(b) The representatives of the United States Railroad Administration will in such proceedings handle to the best advantage all matters involving maintenance, transportation and other items included under operation, and may be called as witnesses for the public, or the corporation, as well as for the Railroad Administration.

"(c) It will be entirely proper to respond to any requests from a municipality, county or state for information in regard to material and labor costs, and to volunteer such data so that all concerned may get the benefit of the information in the hands of the Railroad Administration officials.

"(d) Single complete items involving a charge to capital expenditures of \$1,000 or less should be promptly reported to the corporation to give the corporation the opportunity of handling the matter with the public authority, but in the discretion of the federal manager the work should not be delayed if, and when, in his opinion, a prompt disposition of the matter will be the proper action under all circumstances.

Compliance with Orders Issued by Public Authorities.—"If and when a proceeding before the public authority has resulted in a definite order involving a charge to capital expense, the matter should be promptly reported to the Division of Capital Expenditures, with the position of the corporation officer clearly expressed, together with the recommendations of the federal manager and regional director."

Operation of the Permit System

Walker D. Hines, director general of railroads, has authorized the following statement regarding the application of the permit system:

"Several days ago the Railroad Administration advised the interested shipping public of the plans in contemplation for the handling of the anticipated large grain crops, and stated that it was expected that the permit system would be re-inaugurated with the opening of the new wheat season. Experience last year demonstrated that the permit system of handling traffic was by far the most efficient, and indeed the only way of protecting the shipping public from the car shortages and transportation failures which arose when the eastern terminals were clogged with traffic. Embargoes without the permit feature have proved highly unsatisfactory, disrupting not only operating conditions of the railroads, but also the trade arrangements of shippers.

"The results of the operation of the permit system at the ports had proved so beneficial to all interests that the plan was adopted last year as a means to control shipments to the interior grain markets as quickly as it developed that some control of movement was necessary in order to keep the railroads in a position to do business continuously. Considering the immense territory and the importance and volume of the commodity involved, the results were satisfactory to all interests.

"An embargo temporarily stops all traffic, or all traffic in certain commodities. It is wave-like in its operation. It lacks flexibility. The permit system as applied to grain movement contemplates a regular flow of grain to each market to the maximum ability of the consignees' facilities at the terminal to unload. It also regulates the current movement according to the ability of the railroad to handle. It contemplates a more equitable distribution of equipment with consequently greater benefit to all shippers. It avoids congestion at terminals and in transit, and it consequently results in a freer and heavier movement of grain from the farms because it is restricted only by the available unloading facilities at the markets.

"The permit system will be applied this year the same as last year. A grain control committee will be selected to operate at each primary or terminal market. Each committee will be composed of three members, two representing the operating and traffic departments, respectively, of the Railroad Administration, and the third the transportation division of the United States Grain Corporation. A shipper desiring to ship to any particular market will apply through the railroad agent at point of origin, to the grain control committee at such market, for the necessary permit, which will be promptly issued if conditions admit of the prompt delivery to and acceptance by consignee at destination. A copy of the permit when issued will also be transmitted by the grain control committee to the proper transportation officer of the railroad via which the shipment is to be made so that necessary action may be taken with respect to the furnishing of equipment.

"It will be readily appreciated that not only will producers and shippers of grain be benefited by this regulation in transportation, but the entire shipping public will be benefited in that the channels of commerce will be kept free of congestion, car detention largely eliminated, and the maximum use of all equipment more highly developed."

Contracts Executed

The Railroad Administration has executed a standard compensation contract with the Terminal Railroad Association of St. Louis for \$2,574,510, and also co-operative short line contracts with the Minneapolis, Red Lake & Manitoba, the Flint River & Eastern, and the Roscoe, Snyder & Pacific.

General Order 59 Revoked

Director General Hines has issued General Order 59-A, revoking General Order 59, issued on February 26, which required the railroads to file monthly reports of traffic statistics covering 58 principal commodities.

B. & O. Chicago Terminal Transferred

Effective on June 1, 1919, the Baltimore & Ohio Chicago Terminal Railroad was transferred from the Northwestern region to the Allegheny region, according to Circular No. 84 issued by the director general.

Prospects for Additional Rail Orders

The Railroad Administration is not planning on immediately placing additional orders for rail, although it is recognized that more will be needed and it will probably be necessary to place orders by August 1, when the 200,000 tons just ordered will be delivered. Although the annual requirements of the railroads are usually figured at above 1,500,000 tons for renewals only and not including any new construction, and this figure represents approximately the average of the 10 years ending with 1917, the average rail renewals during the three-year test period ending June 30, 1917, amounted to only about 1,350,000 a year and this is the amount which the Railroad Administration, under the law and its contracts with the railroad companies, is obligated to provide for the years 1918 and 1919. Last year about 1,100,000 tons was used for renewals, so there was a shortage of about 250,000, which would make the requirement for this year 1,600,000. To meet this there was an order on January 1, of the old orders placed by the railroad companies, about 1,100,000 and the recent order makes a total of 1,300,000 to be delivered this year. This apparently would require an additional order of 300,000 tons merely to keep even and it is understood that before the negotiations with the Peek committee were undertaken the Railroad Administration had contemplated an initial order of 500,000 tons. There is also an additional requirement of about 90,000 tons to make the carry-over into 1920 equal to the tonnage on hand at the end of 1917. This amounted to 460,865 tons. On January 1 there was on hand only 369,223 tons, and if the roads are to be returned on December 31 the Railroad Administration would doubtless be obligated to turn over the equivalent of the carry-over into 1917. This would indicate that 390,000 tons is the minimum that must be ordered for this year for upkeep alone, to say nothing of any new work.

During the negotiations between the corporations and the administration over the terms of the standard compensation contract some apprehension was expressed on behalf of the railroads that they might be called upon to pay, by deduction from their rental, for so-called "excess maintenance" which the Railroad Administration might find necessary. Most of such apprehension has doubtless disappeared during recent months, but it would seem that if the administration simply provides for meeting its contract obligations any deferred maintenance accruing during the three years before federal control will be accumulated proportionately during the two years of government control. Moreover, the companies which took advantage of the option afforded them, at the time the old standard price of rails was raised, of saving part of the increase by placing orders for future delivery, will have been deprived of the benefit of their foresight. An interesting question may be raised when the accounts are unscrambled after the end of the year as to whether the government is indebted to the railroads merely for the price of the rail delivered on advance orders of the companies which it has used, or whether it will owe them an equivalent tonnage of rails at the increased prices.

Maintenance Expenditures to Be Checked More Closely

Changes in the organization of the Division of Operation made on June 1, by which W. J. Cunningham and A. M. Burt were appointed assistant directors, are understood to indicate that special attention is to be given to the problem of maintenance expenditures involved in the obligation of government to return railroad properties in as good condition as when taken over, or to perform same amount of upkeep as during the test period. Professor Cunningham has been appointed chairman of the committee on maintenance expenditures, which also includes Mr. Burt, in charge of engineering and maintenance of way, and Frank McManamy, in charge of mechanical matters. Director General Hines has issued an order to the regional directors to limit maintenance of way expenditures for June, in general, to the average ratio to the operation expenses of the test period. This is to afford an opportunity for a closer check and will be followed by more definite instructions for the balance of the year. The order is not a hard and fast one, and is not intended to curtail necessary work. Regional directors are given authority to exceed the limit in emergency cases. The Administration has been proceeding on the plan of measuring upkeep by expenditures during the test period, but the government also has the option of returning the railroad property in as good repair and with as complete equipment as on January 1, 1918, and on this basis there has been some over maintenance on some of the properties which it may be necessary to check in order to expend the proper amount on others.

Orders of Regional Directors

CLAIMS AGAINST WAR DEPARTMENT.—A. H. Smith, regional director, Eastern region, by Circular 401-14A765, advises federal managers to file with the War Department, promptly, all claims for cost of construction or maintenance of tracks which have been laid for the accommodation of the War Department. Under the act of March 2, 1919, these claims must be presented before June 30. Where claims are pending for work of this kind done prior to January 1, 1918, such claims may be combined, in a joint claim, with bills for similar work done since that date.

Intensive Loading of Freight Cars.—The southern regional director, in Circular Letter No. 439, urges continued efforts toward heavy loading of freight cars. See *Railway Age*, May 23, page 1274 (order of Eastern regional director). The need of the meeting of competition will frequently be urged by shippers as a reason for light loading, but where orders from consignees are given as the cause for such, the shippers will nearly always be willing to join in efforts to induce consignees to so arrange their affairs as to order the maximum amounts possible, for the interests of the shipper and the carrier in the matter are identical.

Sodium Nitrate; Hazards in Storage.—A. H. Smith, regional director, Eastern region, by circular 600-179A766, promulgates a special report, received from the Fire Loss and Protection Section, covering hazards in the storage and handling of nitrate of soda in bulk at railroad terminals. When this substance is stored in a frame building it may be better, in case of fire, to allow the building to be destroyed rather than to use much water.

Safety Appliances on Freight Cars; Time Limit September 1.—A. H. Smith, regional director, Eastern region, by Circular 500-92A767, calls the attention of federal managers to the laws of Congress, the orders of the Interstate Commerce Commission and the rules of the Master Car Builders' Association, designed to insure the complete equipment of all freight cars with the legal safety appliances by September

1, 1919. Foreign as well as owned cars should be equipped under certain regulations.

Capital Expenditures on Maintenance Work.—A. H. Smith, regional director, Eastern region, by Circular 2700-A662A, gives further details in connection with D. C. E. Circular 20, in relation to securing the consent of corporations for certain expenditures. For work of any nature, if delays occur in securing the corporation's attitude, the federal manager should wire the regional director for authority to proceed, giving the circumstances necessary to explain the need of special despatch.

Advertising.—Order 208 of the Southwestern regional director quotes instructions with respect to expenditures for advertising issued originally by the regional director of Western railroads in Circular 50, dated March 23, 1918, and adds amendments to these instructions authorizing the exploitation of local excursions and the promotion of travel to local tourist resorts. In cases where two or more roads are interested in a given resort publicity expenditures should in every case be joint. All plans for promotive advertising, after approval by the federal manager, will be referred to the Western Passenger Traffic Committee for review and approval.

Rental Charges on Cars.—Order 207 of the Southwestern regional director cancels Orders 183 and 185 previously issued by the Southwestern regional director pertaining to rental charges on locomotives and other equipment and outlines new rates for locomotives, dining cars, locomotive cranes, etc., effective March 1. These rates do not abrogate those named in any contracts which have been executed prior to the effective date.

Navy Department Recruiting Posters.—Supplement 2 to Circular 201 of the Southwestern regional director directs that the army and the navy be treated alike in the posting of notices in stations. (*Railway Age*, April 18, page 984.)

War Savings Posters.—Supplement 6 to Circular 39 of the Northwestern regional director states that permission has been given the United States Treasury Department to display one War Savings poster in each railroad station.

Transportation of Employees of Steamship Lines.—The Northwestern regional director in Supplement 51 to Circular 20 states that it will not be the policy of the Railroad Administration to issue transportation to officers and employees of ocean steamship lines.

War Risk Insurance Posters.—The Northwestern regional director in Supplement 5 to Circular 39 states that permission has been granted the Public Health Service of the Treasury Department to place a poster in each railroad station, informing the beneficiaries of the War Risk Insurance where medical and surgical care for soldiers, sailors, marines and nurses discharged from military duties can be obtained.

Freight Car Distribution.—The regional director, Eastern region, by a circular dated May 3, calls renewed attention to the instructions concerning the loading of freight cars to points off the loading road. The average percentage of home cars on owning lines is not increasing as fast as it should, and federal managers are now called upon to prohibit the use of system cars, except open-top pool cars, for off-line loading if other suitable cars are available.

Sailing Day Plan.—The Northwestern regional director gives instructions for the handling of schedules for the movement of less than carload freight superseding circular 70 (*Railway Age*, May 2, page 1100).

Gasoline in Wrecks.—The regional director, Eastern region, by circular 602-31A701A, promulgates further advice from the Bureau of Explosives as to precautions to be taken after the occurrence of a train accident where tank cars of gasoline are involved. Wrecking outfits usually have a power pump to transfer liquids, but the use of this involves some risk of fire, and it is suggested that in transferring

oil the wreckers should use a portable pump that can be operated by connecting to the air brake line.

Inspection of Fruits and Vegetables.—A. T. Hardin, regional director, Eastern region, by circular 600-172A737A, advises that the extent to which railroads shall make use of the services of the Department of Agriculture in the inspection of fruits and vegetables is left to the discretion of the federal manager. Information concerning the activities of the Department of Agriculture has been sent to the federal managers to enable them to avail themselves of this service if it is more efficient than that already in effect.

M. W. Expenditures; Ten-Year Comparisons.—A. T. Hardin, regional director, Eastern region, by circular 2700A768, calls upon federal managers for tabulated statements, from all roads in class 1, giving expenditures, by years, for maintenance of way and structures from 1908 to 1917 inclusive; also calendar years 1917 and 1918. The blanks for this data are OS 10-A and OS 10-B. Blueprint copies will be acceptable for the purposes of the Central Administration.

Locomotive Fuel Contracts.—Supplement 17 to Northwestern Regional Purchasing Committee Circular 3 contains the following clause which will be incorporated in all contracts for locomotive fuel: "In the event the railroad is released from federal control before the expiration of this contract, it is understood that the corporate owners have the option to be exercised at their pleasure, of being substituted for the director general of railroads, as to the benefits and obligations of this contract, effective upon the date the owners assume control." This will not require the approval of the corporate companies at this time.

Embargoes, Eastern Region.—A. T. Hardin, regional director, Eastern Region, by circular 2000-15A642A, issues revised rules governing embargoes, taking effect June 10. The New England Embargo Bureau is abolished, and instructions are given for exchanging information between the office of the regional director at New York and that of the district director at Cincinnati. All embargoes are to be promulgated to all interested by wire and confirmed by mail on the same day.

Wages of Trainmen.—The regional director, Eastern Region, by circular 1200-4-56A770 interprets supplement No. 15 to the rules defining local freight services. The term pick-up train includes any freight train running on a through freight schedule which picks up or sets off cars at five or more places.

Cars Rented to War Department.—The regional director, Eastern Region, by circular 500-51A773 promulgates an order from the Division of Operation to the effect that where freight cars are furnished for the War Department, the rental rate is to be uniformly \$3 a day, beginning with June 1. Various rates have heretofore prevailed.

Discipline.—The regional director, Eastern Region, by circular 1200-362A772, promulgates an order from the Division of Operation, that in all cases, and regardless of the wording of agreements upon the subject, employees in train and engine service must be granted a complete investigation before final application of discipline. A man may be held out of service for the investigation, but the investigation in every case must be given before action is taken. The employee should be confronted with the evidence presented against him and in such a way that he may be enabled to meet it and make a defense.

The boatmen in New York harbor, by the result of the agreement reached a month ago, following the general strike, have had their pay increased from \$5 to \$15 a month, with overtime for all work in excess of ten hours a day. The agreement, if ratified by the unions, will run for one year from April 21, 1919. It affects about 4,500 men.

The Second Pan-American Commercial Conference

THAT THE DEVELOPMENT of trade between the United States and the countries of Central and South America is going to depend in no small degree upon the extension of railway lines financed by capital from the United States was one of the strong points among the many brought out at the Second Pan-American Commercial Conference in Washington this week. The leading representatives of many of these countries in the United States were among the speakers and they, as well as others, brought out the necessity of railroad transportation to make available the tremendous natural resources of these countries. They emphasized that much, if not most, of the capital needed for this railway development must come from this country and showed the opportunity that was awaiting the investor in them as well as the trader who would exchange American made goods for the commodities that such new railways would make available.

The conference opened its sessions at the Pan-American building, in Washington, Monday afternoon with about 1,000 diplomatic, commercial and trade representatives of the United States and Latin America in attendance. The conference is the second of its kind (the first having been held in 1911). It lasted five days, with morning, afternoon and evening sessions, at which were discussed all aspects of trade between the United States and Central and South America.

The first session on Monday afternoon was called to order by John Barrett, director general of the Pan-American Union, and presided over by William C. Phillips, assistant secretary of state, in the absence of Frank L. Polk, acting secretary of state and acting chairman of the governing board of the Union. Addresses were made by Thomas R. Marshall, vice-president of the United States; by Beltrán Mathieu, ambassador from Chile; by Ignacio Calderón, minister from Bolivia; by F. H. Gillett, speaker of the House of Representatives, and by Homer L. Ferguson, president of the Chamber of Commerce of the United States.

Beginning with the Monday evening session and continuing over the three sessions on Tuesday, the several Central and South American countries were discussed by representatives of the respective countries, the countries being taken up in alphabetical order and opportunity being afforded for the asking and answering of questions. At the evening sessions stereopticon and motion pictures were shown of the countries then under consideration.

At the Tuesday morning session, in addition, the conference was addressed by Dr. Francisco Tudela y Varela, ambassador of Peru, and by William C. Redfield, secretary of commerce. The Tuesday afternoon session was similarly addressed by Henry P. Fletcher, United States ambassador to Mexico.

The Wednesday morning session was devoted to shipping and other transportation, including aviation; that of Wednesday afternoon to trading methods, including merchandising, business ethics, export and import combinations; and that of Wednesday afternoon to such matters as parcel post, trade marks, trade regulations, packing, etc.

The morning session on Thursday was devoted to financing, investments, credits, government aid to commerce; Thursday afternoon session was devoted to engineering aids to commerce, including railways and highways, waterways, harbors, etc.

The Friday morning session was planned to be devoted to commercial intelligence, including advertising, publicity, etc. Friday afternoon to educational and social auxiliaries to commerce, to be followed on Friday evening by a reception

and garden party on the grounds of the Pan-American Union.

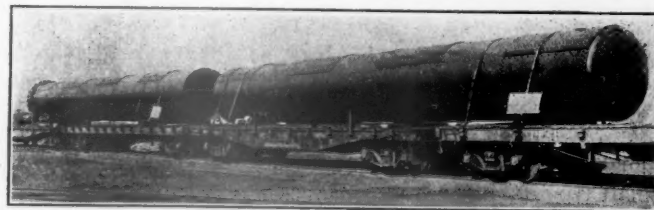
Secretary of Commerce William C. Redfield in his address at the Tuesday morning session pointed out the new facilities made available for Latin American trade in the last few years, and referred particularly to shipping, banking, the growth of our productive capacity and the capital available for investment in other countries. He pointed out that even before the war there were times when there was overproduction and expressed the view that with the increased capacity now existing, export trade was an absolute necessity. He stated his hope that in the future our commerce with foreign countries would be on a permanent and instructive basis and of a kind that would prove of mutual benefit to buyer and seller. The country, he said, is now suffering from an "overdose of prosperity" and he pointed out that as a creditor nation we must be prepared to invest large sums abroad to compensate for the large balances in our favor. This investment he hoped would prove of three-fold value: (1) through the direct return on the investment, (2) as assisting the normal flow of trade, and (3) through the development of wealth by the use of capital as, for instance, in the case of railways, which would open up new regions and make available the great resources now impossible of access.

The minister from Bolivia and the ambassador from Peru both referred to the advantages to be gained by the investment of United States capital in railways in those countries.

"The United States," said Ignacio Calderon, minister from Bolivia, "is now in a position to provide the necessary capital for the construction of railroads and the development of the industries and resources of the southern nations, and besides helping their progress acquire economically the same preponderating position that its policy of right and justice has given to it throughout the world. The investment of American capital would foster our common interests and contribute more than any other thing to the increase of commerce and of our friendly relations."

A Large Timber Treating Retort

THE CONSTRUCTION of what are believed to be the largest timber treating retorts ever installed in the United States has just been completed for the Chicago & North Western by the Wm. Graver Tank Works, Chicago, and they have been shipped to the wood preservation plant of



Timber Treating Retort Ready for Shipment

that road at Escanaba, Mich. These retorts are 113 ft. long and 6 ft. 2 in. in diameter. Their combined weight is approximately 180 tons. They are built to withstand a working pressure of 175 lb. The doors, which weigh 6 tons each, swing on roller bearing hinges.

The Universal Aviation Company is the name of a concern announced as having been organized at Detroit, Mich., to establish regular airplane transportation between that city and Cleveland. The distance between these two cities in an air line is only about 80 miles, or less than half the shortest route by railroad.

Internal Combustion vs. Steam Engines for Small Plants*

By C. A. Lichty

Inspector, Purchasing Department, C. & W. W. W., Chicago

THE SUBJECT of the Internal Combustion versus Steam Engines for Small Stationary Plants permits a wide field of survey. It is assumed that the subject should be limited here primarily to plants for railroad purposes and in sizes not to exceed 40 to 50 hp.

Upon the advent of the gasoline engine it was predicted by many that it would soon put the steam plant out of business, especially at the smaller power stations. But steam was the old reliable for so many years when it was the only power available that where it was once established it has not always been the policy to substitute the newer type of engine during the natural lifetime of the old plant, especially where coal and labor were cheap and where the quality of the water was good for steaming purposes. At some of the important water supply stations steam pumps have been in use ever since the road was built, some of them continuing for years after it was definitely determined that other power was more economical and equally reliable. Some authorities maintain that the larger and more important pumping stations can be operated most successfully by steam, while others are substituting internal combustion engines, even in the immediate vicinity of the coal fields. Many, especially on the northern roads, maintain steam plants, making use of the exhaust steam by running it into the water to keep it from freezing in the tank; besides, when the pump is not in service live steam can be used for the same purpose, as well as to thaw ice from spouts, valves, etc. In most of the states steam plants are subject to a rigid inspection. For instance, in the state of Illinois boilers must be inspected and tested four times per year, and operated only by a licensed engineman.

One of the principal reasons for getting away from the steam pumping plant, in many places, and this may also apply to other steam plants, is on account of frequent renewals of boiler sheets and flues. In some cases boilers have to be changed out in from six months to a year, depending on the nature of the water, necessitating the boilers to go to the shop for repairs. This entails considerable annoyance and expense. The expense for the maintenance of the internal combustion engine is perhaps slightly in excess of that required for the steam engine, but it is seldom necessary to send either type to the shop unless the entire apparatus is in need of overhauling.

Tests for efficiency as far back as 1882 showed that the gasoline unit was an active competitor with the steam plant for small installations, and about 10 years later it was generally conceded that it had gained the supremacy, but just about that time the rapid development of the multi-cylinder, small type of engine used so extensively for propelling automobiles, trucks, motorcycles, airplanes, etc., created such a demand for gasoline as to give the larger sizes of internal combustion engines a temporary setback until it could be arranged to operate them successfully with kerosene and the cheaper grades of fuel oil, since which time they have again made considerable progress.

The cost of installation of the two types of plants under consideration, of like proportions, may differ but little except for plants ranging from 1 to 10 hp., where the oil equipment would be much less. In fact, for plants of this size steam can scarcely be considered a competitor. In some installations of from 20 to 50 hp. the oil engine may be more expensive than the steam engine and boiler. When the additional

space for the housing of the latter and its fuel is taken into consideration, it is doubtful if, in many instances, the steam plant has any advantage in cost.

There is little room for doubt but that the oil engine is much more economical in the matter of attendance. The steam boiler requires nearly an hour to get up steam and almost constant attention thereafter for firing and all of the other necessary requirements, while the oil engine can be started in an instant, and when properly installed and adjusted the attention required is only nominal. It is well known that many of the smaller pumping stations are successfully operated by agents, baggagemen, sectionmen, etc., when conveniently located, in connection with their other duties, requiring but a small share of their time.

A steam plant necessitates about six times the space for transportation and storage of coal that oil does; besides the latter may be conveniently stored underground, where it is entirely out of the way. For reasons just stated the labor required for the handling of coal and ashes is several times that for oil. Some roads require coal to be delivered to small power plants in considerable quantities during certain seasons of the year in order to render cars and labor available for other purposes when they are most needed. The result is that the coal is most always stored outside, where it deteriorates to some extent and is liable to be stolen or may catch fire from spontaneous combustion. A leading authority from one of the prominent railroads estimates that the loss of fuel from all sources in connection with a steam plant sometimes runs as high as 40 per cent, while in the case of oil it is very slight.

The Diesel type of oil engine has reached such a stage of economical operation, together with the small amount of space required for engine and fuel as to come into general use for boats and ships and all kinds of stationary plants from 6 to 500 hp. They operate successfully with all of the cheaper grades of oils except those having a decided asphaltic base, and the manufacturers now claim that they will soon be able to operate on such oils as well.

The thermo-dynamic efficiency of the semi-Diesel and true Diesel engines range roughly from 20 to 35 per cent. The economy in fuel consumption therefore is large when compared with the consumption for ordinary steam engines when it is recalled that the efficiency of the small 4-valve Corliss engine is about 6 per cent; the Corliss compound 9 per cent, and the triple-expansion engine rarely reaches 18 per cent. It is a well-known fact that the simpler types of steam pumps are the most wasteful.

The cost of the different fuels varies, of course, in the different localities, but there is scarcely any place in this country where oil can not enter into competition with coal for the purpose outlined in this subject, while, on the other hand, in many localities the steam plant can not enter into competition. A concrete instance of the relative merits of the two types is cited in the case of a steam plant in a small town which was recently replaced with a modern type of oil engine for operating a small electric lighting plant, where it is stated that the former cost of operation of 20 cents per kw. has been reduced to 4 cents by the new installation. It is not known whether the total difference was due to the change, but no doubt much of it was. In this particular case both coal and oil were produced within 100 miles of the plant. One of our prominent railroads recently installed an oil engine at a pumping station where steam had been in use many years, and a total saving of fuel and labor has effected a saving of from 30 to 40 per cent. Both types of plants are in such general use and their characteristics so well known that when all of the conditions are taken into consideration it should not be difficult to determine which should be selected for any particular locality.

*Abstract of a paper presented at the convention of the International Railway Fuel Association.

General News Department

W. G. Lee has been re-elected president of the Brotherhood of Railroad Trainmen.

The Railway Fire Protection Association will hold its annual meeting at the La Salle Hotel, Chicago, on October 21, 22 and 23.

The Baltimore & Ohio Chicago Terminal has been transferred from the Northwestern region to the Allegheny region, according to Circular 84 issued by the Director General. The change became effective June 1.

The Spokane & Inland Empire, in co-operation with farmers of Spokane county, Wash., has agreed to engage men to patrol the right of way on all its lines outside of the city of Spokane in an effort to exterminate the squirrels which annually destroy great quantities of grain raised on farms adjacent to the railroad. These men will plant poison in squirrel holes on the railroad's property and poison will also be sold to the farmers, who will apply it in a similar manner on their farms.

Five hundred miles in five hours, 40 minutes, 42 seconds, was the speed of Wilcox, the victor in an automobile race on a track at Indianapolis, Ind., on May 31. This speed is at the rate of 87.12 miles an hour. For the first 275 miles the average was 91.34 miles an hour; but some of the contesting cars had accidents, and two of these resulted in fatal injuries to the occupants, three men being killed, two of them by being burned to death; and thereafter the speed of the survivors was not quite so high. Of the large number of contestants, three were very close behind the winner at the end.

The "No-Accident Campaign" on the railroads of the Southwestern Region for the month of May, has resulted in a marked improvement, speaking generally, but in the oil fields of Texas the number of casualties shows a large increase. For the first twenty days of the month, the general result, throughout the region, is a decrease of 60 per cent in the number of casualties to employees; but in the oil districts a number of roads showed large increases, many new and inexperienced men having been employed since last year.

Officers and clerks of the general offices of the International & Great Northern, moving from Houston, Tex., to Palestine, because of the contract between the railroad company and the city requiring the maintenance of general offices in Palestine, arrived in the latter city on Thursday morning last, in a special train. Other departments follow this week and later. Many clerks in Houston resigned their positions rather than move away from the city. The traffic manager, and the general freight agent will retain their headquarters at Houston.

A. H. Smith, Regional Director of the Eastern Region, in bidding official farewell to the federal managers, expressed his thanks to the officers and employees "for the great assistance and loyal effort afforded me and the co-operation displayed between everyone through the very trying months when hostilities were in progress. The prompt movement of troops in such large volume and the efficient handling of traffic is truly a commendable accomplishment. During the unification of the railroads, as was necessary, there has been no feeling whatever. This indicates a breadth of view and loyalty to the Government. The co-operation of every man has been hearty. . . ."

The "Safety-First Movement" on railroads includes, of course, the interests not only of employees but of all other persons as well; and especially persons driving automobiles

over railroad crossings. Robert Scott, chairman of the General Safety Committee of the Atlantic Coast Line, has addressed a special letter to the clergymen in the towns along the lines of his road asking their assistance and co-operation in warning automobile drivers of the importance of the rule to stop, look and listen before crossing a railroad track. The clergymen are especially appealed to because, says Mr. Scott, "the majority of automobile owners in each community are of the best type of citizens, and it is this class, which, as a rule, attend some church regularly."

Chicago railroads, on the occasion of the recent arrival of part of the 33d Division of the army from France, demonstrated the efficiency of their terminal facilities. A total of thirteen special troop trains were moved from New York to Camp Grant, Rockford, Ill., on schedule time without disarranging the customary traffic of the roads. Of the thirteen trains, three arrived at Chicago over the New York Central, three over the Pennsylvania, three over the Baltimore & Ohio, two over the Grand Trunk, and two over the New York, Chicago & St. Louis. Five trains departed from Chicago over the Chicago & North Western, three over the Chicago, Milwaukee & St. Paul, three over the Chicago Great Western, and two over the Illinois Central. The results were obtained through absolute holding to schedule by the Chicago terminal manager's office, the War Department and the hotels where the men were entertained.

The American Association of Engineers has announced a plan of organization for the formation of railroad sections. It provides for the formation of such sections on any railroad where there are 10 or more members or prospective members of the association. In general there should be only one section of any one railroad system, but when the system is large and is divided for general operation and administration by the railroad itself into two or more parts, there can be more than one section if those railroad members so desire. Each railroad section will elect its own officers and may establish its headquarters at any point on the lines of the road, but preferably at the location of the general engineering offices.

The Pennsylvania Railroad Section of the Association will hold its first convention at Pittsburgh, Pa., on June 28. It is planned to have a business meeting in the forenoon and a banquet in the evening. The headquarters of this section will be at the Fulton building, Pittsburgh.

Western Society of Engineers

J. H. Waterman, superintendent of timber preservation, Chicago, Burlington & Quincy, Galesburg, Ill., will present a paper before the Western Society of Engineers, Chicago, on Monday evening, June 9, on "Results Obtained from Treatment of Track Ties and Bridge Timbers."

Utah Central Anniversary Celebration

The Utah State Historical Society has started a movement for a celebration commemorating the laying of the last rail of the first railroad to reach Salt Lake City from the Missouri River, to be held at Salt Lake City on January 12, 1920. Business and social organizations in the city have been invited to participate and the plans, as tentatively prepared, are similar to those for the celebration recently held at Ogden, commemorating the driving of the Golden Spike which completed the first trans-continental railroad. Andrew Jensen, president of the Historical Society, worked on the Utah Central at the time of its building. The Utah Central was completed on January 10, 1870, the last spike being driven

by President Brigham Young in the presence of 15,000 people. The road was 36 miles long from Ogden to Salt Lake, connecting the city with the recently completed Union Pacific. The road is now a part of the Denver & Rio Grande. Salt Lake City had existed for 22 years as a lone community in the midst of the great American desert.

Export Traffic

According to a report on overseas traffic for the week ended May 28 at the North Atlantic ports, there were 27,924 cars of export freight on hand, exclusive of bulk grain and coal, compared with 28,443 cars for the same day of the preceding week. There were 7,998 carloads of export food on hand at these ports, compared with 7,890 carloads as of May 21. The export situation at the port of New York continues to show improvement. The British government has cleaned up practically all the steel on the ground for its account and will commence to bring in steel from interior points. There were 1,574 cars of provisions on hand on the morning of May 29 consigned to the British, French and Italian governments, the Belgian Relief Committee, Food Administration and Packers Relief. There were stored in elevators at North Atlantic ports on May 28, 13,751,076 bushels of grain. There was received during the week 6,620,496 bushels, while 7,081,201 bushels were cleared. At South Atlantic and Gulf ports as of May 24, there were 10,550 carloads of export freight on hand, as against 9,751 cars as of May 17. There were 5,331,475 bushels of grain stored in elevators at the same ports on May 17.

Advances to Railroads By War Finance Corporation

Advances to railroad companies and the Railroad Administration by the War Finance Corporation up to May 14 amounted to \$181,710,090. The advances from April 23 to May 14 were as follows:

Central Railroad of New Jersey, \$1,468,800; Philadelphia & Reading, \$1,000,000; Lehigh Valley, \$240,000; Baltimore & Ohio, \$1,700,000; Boston & Maine, \$216,800; Buffalo, Rochester & Pittsburgh, \$449,600; Central Vermont, \$128,800; Chesapeake & Ohio, \$400,000; Chicago, Burlington & Quincy, \$1,520,000; Chicago, Rock Island & Pacific, \$436,800; Delaware & Hudson, \$753,000; Hocking Valley, \$100,000; Illinois Central, \$1,700,000; International & Great Northern, \$387,200; Missouri, Kansas & Texas, \$342,000; New York, New Haven & Hartford, \$1,312,000; New York, Susquehanna & Western, \$100,000; Pere Marquette, \$140,000; San Antonio & Aransas Pass, \$53,000; Spokane, Portland & Seattle, \$100,000; Virginian Railway Co., \$775,000; Wabash, \$976,000, and Western Maryland, \$213,600.

Prevention of Collisions

The secretary of the New York Public Service Commission, Second District, advises that among the men who are expected to attend the hearing on the collision problem in New York City next week (announced in the *Railway Age* last week, page 1333), are Major Azel Ames, New York; Frank Rhea, New York; C. H. Morrison, New Haven; Daniel Willard, Baltimore; Julius Kruttschnitt, New York; E. W. McKenna, New York; S. M. Felton, Chicago; W. L. Derr, Clarion, Ia.; J. B. Fisher, Philadelphia; G. L. Peck, Pittsburgh; A. R. Whaley, New York; J. O. Young, Newark, N. J.; D. H. Schwyer, Easton, Pa.; Frank J. Sprague, New York; James L. Truden, Boston.

The hearing will be conducted by the commission, Charles B. Hill (chairman), Frank Irvine, John A. Barhite, Thomas F. Fennell and J. A. Kellogg; with C. R. Vanneman, chief of the division of steam railroads. It will be held in the Hall of Records, Chambers street, near the City Hall, beginning at 10 a. m. on Wednesday, the 18th.

Honor to British Dead

[From the *Railway Gazette*, London]

St. Paul's Cathedral was filled with a congregation of about 4,000 persons at the memorial service on Wednesday afternoon last, when honor was shown to nearly 19,000 railway men who, in the service of their country, have made the great sacrifice.

There were many characteristics in the service that will make it memorable to those who had the privilege of being present. There was the presence of the king, thus signifying once more the interest shown by his majesty in the railway service; the large number of railway chairmen, directors and chief officers, together with representatives of the Board of Trade and other government departments, of the naval and military forces, of the men's widows, and the over 3,000 relatives of those railwaymen who have fallen. The exquisite and appropriate music provided by the orchestra under Colonel Galloway was, in itself, a marked feature. The address of the Bishop of Peterborough was in keeping with the spirit of the occasion—one of gratitude to those who have fought, and of determination that there shall be a new permanent way of peace and good-will built on righteousness, justice and fellowship among men.

Progress on Alaskan Railway Construction

Figures showing the total amount of work done in the construction of the Alaskan Government Railway from the beginning of activities to April 30, 1919, were published in the Alaskan Railroad Record of May 13. On the main line 148.02 miles of track, 8.28 miles of sidings, 0.92 miles of spur tracks and 8.05 miles of terminal yard tracks have been laid, while on branch lines 37.72 miles of track, 2.36 miles of sidings, and 6.97 miles of spur tracks have been built. A total of 8,502,847 cu. yd. of material has been placed in embankments, 554,750 lin. ft. of piling has been placed in temporary and permanent structures, 3,000 cu. yd. of concrete has been deposited, 9½ miles of wagon road have been built, and 243 miles of temporary and permanent telegraph lines have been erected.

Alaska has warm sunshine and grass, and the Spring is not so backward as might be imagined, nevertheless the operation of railways has its peculiarities. The Alaska Railroad Record of May 13, says that work had just been undertaken to open a section of the line which has been closed by snow slides for some time, sluicing being resorted to to remove a heavy snow bank lying across the track at mile 76. At another point on the line a ditcher has been working, removing mud slides from the track.

Telegraph Superintendents' Convention

The Telegraph and Telephone Division of the American Railway Association—formerly the Association of Railway Telegraph Superintendents—will hold its annual meeting at La Salle Hotel, Chicago, on June 11, 12 and 13. There are six committees. Committee No. 1, on construction and maintenance, will present four reports by four sub-committees. (1) Preliminary draft of a pole line specification. (2) A progress report on a crossing specification. (3) Complete specification for installation of underground conduits. (4) Complete specification for transposition of telephone circuits.

Other committees will report on (a) preliminary draft of specification for installation of telegraph and telephone equipment in railroad offices. (b) Protection against electrolysis. (c) Preliminary draft of specification for protection against lightning and against high power circuits. (d) Advances and development in the telegraph and telephone field. (e) Report on message traffic, mailgrams, censoring, etc.

There will be an election of officers and members of certain committees. On the evening of June 12 there will be a banquet at the La Salle Hotel.

The chairman of this division is Martin H. Clapp, manager of the Telegraph Section of the United States Railroad Administration, 18th street and Pennsylvania avenue N. W., Washington, D. C.

Manufacturers of Mechanical Handling Equipment

All manufacturers of mechanical handling machinery and equipment and accessories in the United States are invited to attend the coalition meeting of the Material Handling Machinery Manufacturers' Association (35 West 39th street, New York City), which will be held at the Hotel Astor, New York City, on Wednesday, June 11, morning, afternoon and evening. This includes makers of cranes, winches and hoists; elevators; gravity and power conveying machinery and ap-

paratus; industrial truck, tractors and trailers; bulk handling machinery, and all makers of equipment and accessories such as storage batteries, bearings, ropes for hoists, buckets, electric controllers and apparatus, etc.

The advertising managers of the companies manufacturing these products are also invited to hold a preliminary conference at Hotel Astor the evening before, at which time it is planned to form an advertising council.

Among the speakers for the day meeting are James H. Collins and Francis Holley. Mr. Holley will tell how educational and industrial moving picture films are distributed throughout the world so that they reach millions of people. At the evening meeting, addresses will be made by former Senator Theodore Burton and Murray Hulbert, Commissioner of Docks of New York City.

The committee having the meeting plans in charge consists of W. J. L. Banham (chairman), Otis Elevator Company; Frederick Stadelman, of Wellman-Seaver-Morgan Company, and E. Logan Hill, of Heyl & Patterson.

The Canadian Strike Situation

The general strike at Winnipeg continues, although executives of the railway brotherhoods, acting as strike mediators, have succeeded in obtaining proposals of settlement both from the Metal Trades Council which started the strike, and from Winnipeg employers. The negotiations, which have been conducted by the brotherhood mediators, have been strictly secret, but it is understood that the principle of collective bargaining, one of the planks in the strikers' platform, was recognized in both settlement proposals. The next step, insofar as the brotherhoods are concerned, is to submit a compromised plan to the two factions. No extensive disorders have been reported, the strikers being inclined to avoid open breaks which would result in the calling in of the military forces which have been mobilized and are ready for immediate action.

Railway mail clerks of the Winnipeg division who have been on a sympathetic strike, have returned to work. The strikers appeared before Gideon Robertson, federal minister of labor, and asked permission to resume their work. Having made their application before the expiration of a 24-hour ultimatum issued by the government, they were allowed to return to their former positions.

The Winnipeg police force has not been called out on a sympathetic strike, although the men have refused to sign an agreement not to affiliate with any organization that might be called out on a sympathetic strike in the future. However, the men have not indicated that they intend to join in the general strike.

At Toronto, where a general strike has also been in progress for several days, the Metal Trades Council, again the instigator of the strike, has issued an appeal urging other workers who have inaugurated sympathetic strikes in its behalf to return to their jobs. No trouble has been reported at Toronto with railroad employees. General strikes called in sympathy with the Winnipeg strikers at other points in Canada do not appear to be serious and business at such points as Vancouver, B. C., Edmonton, Alta., Calgary and Lethbridge where sympathy strikes have been called is continuing as usual.

Latest reports indicate that at Winnipeg railroad shopmen and commercial telegraph operators were returning to work, and that at Toronto the general strike had lost its vitality.

"Cut Off One from the Hind End"

Leaving a passenger car while continuing the train at full speed is a custom which American passenger conductors have long since outgrown (and which, indeed, many of them probably never heard of); but in England the fashion is still favored, as will be seen by the following note from the Railway Gazette of London:

"One of the welcome signs of the return of our railways to more normal conditions is found in the new Great Western timetable where 'slips' are shown off the 10:30 a. m. Paddington at Taunton and the 8:30 a. m. Plymouth at Westbury. When war conditions began to press heavily upon the country the system of slipping coaches from express and other through trains had to be abandoned. The Great Western employ a very safe and simple

mechanism for slipping coaches, and had for many years developed a most important series of services to branch lines by means of slip coaches which offered many advantages over the alternative arrangement of stopping the through train and either putting off coaches or causing the passengers to change into the branch train. In pre-war days the 'Limited' 10:30 a. m. ex Paddington had a through run to Plymouth, doing the journey in 4 hours 7 minutes, and three slips were dropped at Westbury, Taunton and Exeter respectively. To give the same branch connections without the slips would have prolonged the journey to the West at least 30 minutes—a serious delay to an important train. We have no doubt that as opportunity offers these slip services will be resumed. They have been greatly missed, and their resumption will materially add to the comfort of the travelling public."

Meetings and Conventions

The following list gives names of secretaries, dates of next or regular meetings and places of meetings:

- AIR BRAKE ASSOCIATION.—F. M. Nellis, 165 Broadway, New York City.
- AMERICAN ASSOCIATION OF DEMURRAGE OFFICERS.—F. A. Pontious, Supervisors of Demurrage and Storage, C. & N. W. Ry., Chicago.
- AMERICAN ASSOCIATION OF DINING CAR SUPERINTENDENTS.—E. H. Thayer, St. Louis-San Francisco R. R., St. Louis, Mo.
- AMERICAN ASSOCIATION OF FREIGHT AGENTS.—R. O. Wells, Illinois Central, Chicago. Next meeting, June 17-20, Cleveland, Ohio.
- AMERICAN ASSOCIATION OF GENERAL BAGGAGE AGENTS.—J. E. Quick, Port Huron, Mich.
- AMERICAN ASSOCIATION OF PASSENGER TRAFFIC OFFICERS.—W. C. Hope, C. R. R. of N. J., 143 Liberty St., New York.
- AMERICAN ASSOCIATION OF RAILROAD SUPERINTENDENTS.—J. Rothschild, Union Station, St. Louis, Mo.
- AMERICAN ELECTRIC RAILWAY ASSOCIATION.—E. B. Burritt, 8 W. 40th St., New York. Next convention, October 6-10, Atlantic City, N. J.
- AMERICAN ELECTRIC RAILWAY MANUFACTURERS' ASSOCIATION.—C. F. J. Dell, 50 E. 42nd St., New York.
- AMERICAN RAILROAD MASTER TINNERS', COPPERSMITHS' AND PIPE FITTERS' ASSOCIATION.—Otto E. Schlinck, 485 W. 5th St., Peru, Ind.
- AMERICAN RAILROAD ASSOCIATION.—J. E. Fairbanks, 75 Church St., New York.
- Operating Section (including former activities of Association of Railway Telegraph Superintendents' and Railway Storekeepers' Association).
- Engineering Section (including former activities of Railway Signal Association).
- Mechanical Section (including former activities of Master Car Builders' and Master Mechanics' Association).
- Traffic Section (including former activities of Freight Claim Association).
- Transportation Section (including former activities of Association of Transportation and Car Accounting Officers).
- AMERICAN RAILWAY BRIDGE AND BUILDING ASSOCIATION.—C. A. Lichty, C. & N. W. Ry., 319 N. Waller Ave., Austin Station, Chicago. Next convention, October 21-23, 1919, Cleveland, O.
- AMERICAN RAILWAY ENGINEERING ASSOCIATION.—E. H. Fritch, 431 South Dearborn St., Chicago.
- AMERICAN RAILWAY MASTER MECHANICS' ASSOCIATION (see American Railroad Association, Mechanical Section).—Acting Secretary, V. R. Hawthorne, 431 South Dearborn St., Chicago. Next annual convention, June 23-25, 1919, Atlantic City, N. J.
- AMERICAN RAILWAY PERISHABLE FREIGHT ASSOCIATION.—E. F. McPike, 135 E. 11th Place, Chicago. Regular meetings, 2d Wednesday in March and September.
- AMERICAN RAILWAY TOOL FOREMEN'S ASSOCIATION.—R. D. Fletcher, 6202 Greenwood Ave., Chicago. Next convention, August 27-29, Hotel Sherman, Chicago.
- AMERICAN SOCIETY FOR TESTING MATERIALS.—C. L. Warwick, University of Pennsylvania, Philadelphia, Pa. Next meeting, June 24-27, 1919, Hotel Traymore, Atlantic City, N. J.
- AMERICAN SOCIETY OF CIVIL ENGINEERS.—Charles W. Hunt, Engineering Societies Building, 33 W. 39th St., New York. Regular meetings, 1st and 3d Wednesday in month except July and August, 220 W. 57th St., New York. Next annual convention, June 17-20, Hotel Radisson, Minneapolis, Minn.
- AMERICAN SOCIETY OF MECHANICAL ENGINEERS.—Calvin W. Rice, 29 W. 39th St., New York.
- AMERICAN SHORT LINE RAILROAD ASSOCIATION.—T. F. Whittelsey, 708 Union Trust Bldg., Washington, D. C.
- AMERICAN TRAIN DESPATCHERS' ASSOCIATION.—D. L. Darling, Northern Pacific Ry., Spokane, Wash. Next convention, June 17-20, Hotel La Salle, Chicago.
- AMERICAN WOOD PRESERVERS' ASSOCIATION.—F. J. Angier, B. & O., Mt. Royal Sta., Baltimore, Md.
- ASSOCIATION OF MANUFACTURERS OF CHILLED CAR WHEELS.—George W. Lyndon, 1214 McCormick Bldg., Chicago. Semi-annual meeting with Master Car Builders' Association.
- ASSOCIATION OF RAILWAY CLAIM AGENTS.—Willis H. Failing, C. R. R. of N. J., Jersey City, N. J.
- ASSOCIATION OF RAILWAY ELECTRICAL ENGINEERS.—Jos. A. Andreuccetti, C. & N. W., Room 411, C. & N. W. Sta., Chicago. Next meeting, October, 1919, Chicago.
- ASSOCIATION OF RAILWAY TELEGRAPH SUPERINTENDENTS (see American Railroad Association, Operating Section).—W. L. Connelly, N. Y. C. R. R., Gibson, Ind.
- ASSOCIATION OF TRANSPORTATION AND CAR ACCOUNTING OFFICERS (see American Railroad Association, Transportation Section).—G. P. Conard, 75 Church St., New York.
- BRIDGE AND BUILDING SUPPLY MEN'S ASSOCIATION.—M. J. Trees, Chicago, Bridge & Iron Company, Chicago. Next annual convention, October 21-23, 1919, Cleveland, O.
- CANADIAN RAILWAY CLUBS.—James Powell, 46 Aberdeen Ave., St. Lambert (near Montreal), Que.
- CAR FOREMEN'S ASSOCIATION OF CHICAGO.—Aaron Kline, 841 Lawler Ave., Chicago. Regular meetings, 2d Monday in month, except June, July and August, New Morrison Hotel, Chicago.

CENTRAL RAILWAY CLUB.—Harry D. Vought, 95 Liberty St., New York. Regular meetings, 2d Thursday in November, and 2d Friday in January, March, May and September, Hotel Statler, Buffalo, N. Y.

CHIEF INTERCHANGE CAR INSPECTORS' AND CAR FOREMEN'S ASSOCIATION.—W. R. McMunn, New York Central, New York.

CHIEF INTERCHANGE CAR INSPECTORS' AND CAR FOREMEN'S SUPPLY MEN'S ASSOCIATION.—D. B. Wright, Lehon Company, 45th and Oakley Sts., Chicago.

EASTERN RAILROAD ASSOCIATION.—D. G. Stuart, Washington, D. C.

FREIGHT CLAIM ASSOCIATION (see American Railroad Association, Traffic Section).—Lewis Pilcher, R. F. & P., Richmond, Va.

GENERAL SUPERINTENDENTS' ASSOCIATION OF CHICAGO.—A. M. Hunter, 321 Grand Central Sta., Chicago. Regular meetings, Wednesday preceding 3d Friday in month, Room 856, Insurance Exchange Bldg., Chicago.

INTERNATIONAL RAILROAD MASTER BLACKSMITHS' ASSOCIATION.—A. L. Woodworth, B. & O., Lima, Ohio. Next convention, August 19-21, Hotel Sherman, Chicago.

INTERNATIONAL RAILWAY FUEL ASSOCIATION.—J. G. Crawford, 702 E. 51st St. Chicago.

INTERNATIONAL RAILWAY GENERAL FOREMEN'S ASSOCIATION.—Wm. Hall, 1061 W. Wabash Ave., Winona, Minn. Next convention, October 21-23, 1919, American Annex Hotel, St. Louis, Mo.

MAINTENANCE OF WAY AND MASTER PAINTERS' ASSOCIATION.—F. W. Hager, 1323 Hurley Ave., Ft. Worth, Tex. Next annual convention, October 21-23, 1919, American Annex Hotel, St. Louis, Mo.

MASTER BOILER MAKERS' ASSOCIATION.—Harry D. Vought, 95 Liberty St., New York.

MASTER CAR AND LOCOMOTIVE PAINTERS' ASSOCIATION OF THE UNITED STATES AND CANADA.—A. P. Dane, B. & M., Reading, Mass. Next meeting, September, 1919, Chicago.

MASTER CAR BUILDERS' ASSOCIATION (see American Railroad Association, Mechanical Section).—Acting Secretary, V. R. Hawthorne, 431 South Dearborn St., Chicago. Next annual meeting, June 18-21, Atlantic City, N. J.

NATIONAL ASSOCIATION OF RAILWAY AND UTILITIES' COMMISSIONERS.—James B. Walker, 49 Lafayette St., New York. Next annual convention, October 14, 1919, Indianapolis, Ind.

NATIONAL FOREIGN TRADE COUNCIL.—O. K. Davis, 1 Hanover Square, New York.

NATIONAL RAILWAY APPLIANCES ASSOCIATION.—C. W. Kelly, Kelly-Derby Co., Peoples Gas Bldg., Chicago.

NEW ENGLAND RAILROAD CLUB.—W. E. Cade, Jr., 683 Atlantic Ave., Boston, Mass. Regular meetings, 2d Tuesday in month, excepting months of June, July, August and September.

NEW YORK RAILROAD CLUB.—Harry D. Vought, 95 Liberty St., New York. Regular meeting, 3d Friday in month, except June, July and August, 29 W. 39th St., New York.

NIAGARA FRONTIER CAR MEN'S ASSOCIATION.—George A. J. Hochgrebe, 623 Brisbane Bldg., Buffalo, N. Y. Regular meetings, 3d Tuesday in each month, Tenjost Hall, Buffalo, N. Y.

PACIFIC RAILWAY CLUB.—W. S. Wollner, 64 Pine St., San Francisco, Cal.

RAILWAY ACCOUNTING OFFICERS' ASSOCIATION.—E. R. Woodson, 1116 Woodward Bldg., Washington, D. C. Next annual meeting, June 11, 1919, Hotel Commodore, New York.

RAILWAY BUSINESS ASSOCIATION.—Frank W. Noxon, 30 Church St., New York. Next annual meeting, December, 1919, Buffalo, N. Y.

RAILWAY CLUB OF PITTSBURGH.—J. D. Conway, 515 Grandview Ave., Pittsburgh, Pa. Regular meetings, 4th Thursday in month except June, July and August, Colonial Annex Hotel, Pittsburgh, Pa.

RAILWAY DEVELOPMENT ASSOCIATION.—D. C. Welty, Missouri Pacific R. R., St. Louis, Mo.

RAILWAY ELECTRIC SUPPLY MANUFACTURERS' ASSOCIATION.—J. Scribner, General Electric Co., Chicago. Annual meeting with Association of Railway Electrical Engineers.

RAILWAY EQUIPMENT MANUFACTURERS' ASSOCIATION.—D. L. Eubank, Galena Signal Oil Company, Richmond, Va. Next annual meeting, September, 1919, Hotel Sherman, Chicago.

RAILWAY FIRE PROTECTION ASSOCIATION.—G. L. Ball, St. Louis-San Francisco Ry., St. Louis, Mo.

RAILWAY REAL ESTATE ASSOCIATION.—James P. Nelson, President, C. & O., Richmond, Va.

RAILWAY SIGNAL ASSOCIATION (American Railroad Association, Engineering Section, Signal Division).—H. S. Balliet, Bethlehem, Pa., 75 Church St., New York. Next meeting, June 26 and 27, "The Breakers," Atlantic City, N. J.

RAILWAY STOREKEEPERS' ASSOCIATION.—J. P. Murphy, N. Y. C. R. R., Box C, Collinwood, Ohio.

RAILWAY SUPPLY MANUFACTURERS' ASSOCIATION.—J. D. Conway, 1841 Oliver Bldg., Pittsburgh, Pa. Next annual meeting, June 18-25, 1919, Atlantic City, N. J.

RAILWAY TELEGRAPH AND TELEPHONE APPLIANCE ASSOCIATION.—G. A. Nelson, Waterbury Battery Co., 30 Church St., New York.

ROADMASTERS' AND MAINTENANCE OF WAY ASSOCIATION.—P. J. McAndrews, C. & N. W. Ry., Sterling, Ill. Next annual convention, September 16-18, 1919, Chicago.

ST. LOUIS RAILWAY CLUB.—B. W. Frauenthal, Union Station, St. Louis, Mo. Regular meetings, 2d Friday in month, except June, July and August.

SIGNAL APPLIANCE ASSOCIATION.—F. W. Edmunds, West Nyack, Rockland County, New York.

SOCIETY OF RAILWAY FINANCIAL OFFICERS.—L. W. Cox, 1217 Commercial Trust Bldg., Philadelphia, Pa.

SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.—A. J. Merrill, P. O. Box 1205, Atlanta, Ga. Regular meetings, 3d Thursday in January, March, May, July, September and November, Piedmont Hotel, Atlanta.

SOUTHERN ASSOCIATION OF CAR SERVICE OFFICERS.—E. W. Sandwich, Western Ry. of Ala., Atlanta, Ga.

SUPPLY ASSOCIATION OF AMERICAN RAILWAY TOOL FOREMEN'S ASSOCIATION.—C. N. Thulin, Duff Manufacturing Company, 935 Peoples Gas Bldg., Chicago. Next convention, August 27-29, Hotel Sherman, Chicago.

TRACK SUPPLY ASSOCIATION.—W. C. Kidd, Ramapo Iron Works, Hillburn, N. Y. Next annual convention, September 16-18, 1919, Auditorium Hotel, Chicago.

TRAVELING ENGINEERS ASSOCIATION.—W. O. Thompson, N. Y. C. R. R., Cleveland, O. Next annual meeting, September 9-12, 1919, Hotel Sherman, Chicago.

WESTERN ASSOCIATION OF SHORT LINE RAILROADS.—Clarence M. Oddie, Mills Bldg., San Francisco.

WESTERN RAILWAY CLUB.—J. M. Byrne, Chief Clerk to Mechanical Assistant, Central Western Region, 547 Jackson Blvd., Chicago. Regular meetings, 3d Monday in month, except June, July and August.

WESTERN SOCIETY OF ENGINEERS.—Edgar S. Nethercut, 1735 Monadnock Block, Chicago. Regular meetings, 1st Monday in month, except July and August.

Traffic News

The Montana Freight Rate Association asks for interline freight rates upon both class and commodity rates. At the present time Montana has no interline rates except on coal and cement, and it is claimed that the present system of rate making confines business of Montana cities almost exclusively to the railroads upon which they are situated and to the advantage of outside competition.

Changes in passenger train service between San Francisco, Cal., and Goldfield, Nev., cutting the time between the two cities by nearly 12 hours and providing night travel across the desert in both directions have been announced by W. R. Scott, federal manager of the Southern Pacific. The new service begins on June 8, and follows a conference held before the Nevada State Railroad Commission to devise means of accommodating the increased travel to the new gold fields.

Loading of freight in the Northwestern region for the week ending May 27, shows a decrease of 8,077 cars from the records established for the corresponding week last year. The comparative size of the present wheat crop as compared with that of last year is shown by an increase of 5,725 cars of grain and grain products loaded. The number of cars of livestock and miscellaneous freight loaded show slight increases while the number of cars of coal and coke, lumber and forest products and ore loaded during this period show a decrease from the records established last year.

The William Graver Tank Works, East Chicago, Ind., has petitioned the Chicago Eastern District Freight Traffic Committee for a fabrication-in-transit arrangement at East Chicago, Ind., in lieu of the existing arrangement which permits only fabrication of iron and steel framework or sections for bridges and buildings. It is desired to extend the application of this arrangement to cover iron and steel in carloads, fabricated into iron and steel framework or sections for bridges, buildings, towers, tanks, stand pipes, steel riveted pipes and smoke stacks. The petition is based on the fact that competitors now enjoy such an arrangement in connection with fabrication-in-transit privilege at Greenville and Sharon, Pa.

The report of the Market Survey Committee, composed of representatives of various organizations of the grain trade, the Bureau of Markets of the Department of Agriculture and the Car Service Section of the Railroad Administration and formed to study conditions of grain markets east of the Rocky mountains to the end that greater uniformity may be had in the inspection of grain and greater efficiency in the handling of grain cars, contains several interesting conclusions and recommendations concerning the transportation phase of the problem. It is suggested in the report that railroads assign certain designated tracks as a "grain hold yard" and so far as possible place all of the grain cars that arrive upon these tracks. During periods when there is an unusual rush of grain, making it necessary to hold some of the cars on other tracks, the railroads should give the grain inspection officials a location notice of the cars. Regarding the unification of terminals under the Railroad Administration the report states that this unification has made it possible for carriers to adopt practices which have materially increased efficiency in the handling of grain and it is recommended that these practices be continued when the railroads are returned to private control. To decrease the necessity for embargoes or the use of a permit system the committee suggests that prompt inspection be made upon inbound and outbound cars and that disposition orders be given promptly. To further increase the efficiency of this work it is recommended that the railroads should provide some central location for the receipt of such orders and should also arrange to have them promptly executed after they are received.

Commission and Court News

Interstate Commerce Commission

Oral arguments in the railroad valuation cases set by the Interstate Commerce Commission for May 26 at Washington have been postponed, at the request of the President's Conference Committee on Valuation.

The Commission has issued a supplemental order in the 15 per cent case allowing carriers to preserve the groupings of points of origin and destination in Central Freight Association territory which have heretofore been observed in making joint rates between that territory and the southwest. Joint through rates applying in both directions between Central Freight Association territory and the southwest may be increased, subject to the western classification, by amounts applying to the various sections prescribed in the order. This is because the joint through rates between C. F. A. territory and the southwest have been maintained for many years on a relationship which would be seriously modified by a strict compliance with the commission's previous orders in this case and that such orders would further result in breaking up the method of grouping points of origin which has existed for a series of years.

Referees to Determine Compensation of Arkansas & Louisiana Midland

The Interstate Commerce Commission, without deciding whether or not the Arkansas & Louisiana Midland was ever under federal control, has announced its decision to appoint a board of referees, as petitioned for by the company, to determine its just compensation in accordance with the provisions of the federal control law. The board consists of Commissioner C. C. McChord, P. J. Farrell, general counsel, and A. G. Hagerty, attorney-examiner. The appointment of the board was opposed by the Railroad Administration on the ground that the road had been relinquished and that no direct control had ever been exercised over it. The hearing before the commission on the application for the appointment of a board was reported in the *Railway Age* of May 23.

State Commissions

The Railroad Commission of Georgia has completed its 46th annual report. It shows a decrease of 53 miles in the length of railroad in the state, a large decrease in the number of persons killed on steam railroads, but an increase in the casualties on street railroads. Although the activities of the commission have been limited by federal control of railroads, especially as relates to mandatory orders, the work of the commission has been heavy. It has been continually necessary for the commission to handle matters with the federal authorities, the proceedings frequently involving more time and labor than would have been necessary under former conditions. During 1918 the number of subjects handled was less than in 1917, but in the first three months of 1919 the number was larger than in the same period of any previous year.

Court News

Knowledge of Real Character of Shipment

A corporation is not chargeable with knowledge of facts which become known to its agent unless the agent in the line of his duty ought and would reasonably be expected to communicate the knowledge to his principal. Applying this rule, the Circuit Court of Appeals, Seventh Circuit, holds that the knowledge of the real character of a shipment, by an employee, such as a car repairer or trackman, who has no function whatever with respect to receiving or classifying

freight, would not ordinarily be the knowledge of the company.—*Elgin J. & E. vs. U. S.*, 253 Fed. 907.

Safety Appliance Act

The Circuit Court of Appeals, Third Circuit, holds that an employee of an interstate railroad whose injury was caused by the failure of the company to comply with the requirements of the Safety Appliance Act as to automatic couplers, may recover therefor, although not himself employed in interstate commerce.—*Devine vs. B. R. & P.*, 253 Fed. 948.

Federal Control—District of Suit

The federal district court in Nebraska holds that under Sections 8 and 10 of the Act of Congress of March 21, 1918, and despite Section 9 thereof, orders of the Director General that suits against carriers while under federal control should be brought in the county or district where the plaintiff resided at the time of the accrual of the action, were not effective to limit that right, and, where authorized by state law, a plaintiff might sue in a district other than that in which he resided at the time of such accrual upon a cause of action not arising out of the railroad company's duties as a common carrier.—*Friesen v. Rock Island*, 254 Fed. 875.

Doing Business in a State

The Circuit Court of Appeals, Fifth Circuit, holds that a foreign railroad company, not undertaking to do within the state any of those things for which it is incorporated, although it has managers in the state who direct its operations in other states, and which employs only the clerical force necessary for that purpose and uses the mails and interstate telegraphs in transmitting orders, is not to be regarded as doing that character of business which renders it subject to personal judgment in the courts of the state for a tort committed in another state.—*Atchison, T. & S. F. Co. v. Weeks*, 254 Fed. 513. Decided December 20, 1918.

Stay of Action Under General Order No. 26

The federal district court for the Southern District of New York holds that General Order No. 26, dated May 28, 1918, providing that "upon a showing by the defendant carrier that the just interests of the government would be prejudiced by a present trial of any suit against a carrier under federal control * * * the suit shall not be tried during the period of federal control" is within the powers conferred by Congress and the President, but an application for a stay is addressed to the discretion of the court, and the burden rests on the defendant to show that its interests would be substantially prejudiced by a present trial.—*Marnick v. Pennsylvania*, 254 Fed. 748. Decided June 12, 1918.

Joint Use of Railroad Property—

Injuries to Servants of Other Road

While the law of Illinois requires each company, in case of the joint use of railroad property, to exercise ordinary care for the safety of employees of the other company, the Circuit Court of Appeals, Eighth Circuit, holds, in an action against one company by an employee of the other for personal injuries, that the defendant, which owned its own right of way, was under no duty to guard it for employees of the other company, whose terminal facilities it used; there being no usage of the defendant's right of way by such employees.—*Friedman v. Vandalia*, 254 Fed. 292. Decided October 28, 1918.

Actions Against Railroads Under Federal Control

The federal district court for the Eastern District of Missouri holds that the amended regulation No. 18a, promulgated by the Director General of Railroads, April 18, 1918, providing that "all suits against carriers while under federal control must be brought in the county or district where the plaintiff resided at the time of the accrual of the

cause of action or in the county or district where the cause of action arose," as applied to suits in the federal courts, is within the authority conferred on the President by Act March 21, 1918, providing for federal control of railroads during the war and authorizing the President to make regulations therefor. It is also held that the act is within the war powers of Congress and constitutional.—Wainwright vs. Pennsylvania, 253 Fed. 459.

Severance of Railroad Property for Foreclosure Sale

The Circuit Court of Appeals, Seventh Circuit, holds that in the separation of a railroad into parcels for sale under the foreclosure of divisional mortgages, a court of equity is not bound by any hard and fast rule to fix the division to correspond absolutely with the several mortgage grants, but the division should be made so as to leave each parcel as nearly as may be in a situation to be operated as a railroad. Applying this rule in the foreclosure of constituent mortgages on the property of a consolidated railroad company, the court held that the division located in Indiana should be given a line to Chicago, and that it was proper, other creditors and lienholders being protected, to sell, with one of the constituent parcels, equipment used for the operation of that parcel, though it was not subject to the mortgage or the lien. A railroad without equipment can serve no function.—Metropolitan Trust Co., vs. C. & E. I., 253 Fed. 868.

Action Against Railroads Under Federal Control

In an action by a switchman against his employer railroad for personal injuries, the Texas Court of Civil Appeals holds that General Orders Nos. 18 and 18a of the Director General of Railroads, dated April 9 and 18, 1918, in so far as they require all suits against carriers under federal control to be brought in the county or district where the plaintiff resides or resided at the time of the accrual of the cause or in the county or district where the cause arose, is inconsistent with and contrary to section 10 of the Act of Congress of March 21, 1918, providing that "actions at law or suits in equity may be brought by and against such carriers and judgments rendered as now provided by law"; and that the General Order No. 26 of the Director General, dated May 23, 1918, ordering that actions and suits under General Order No. 18 should abate during federal control, is inconsistent with and contrary to the same section.—El Paso & S. W. v. Lovick (Tex.), 240 S. W. 283. Decided March 27, 1919.

Discriminations While Embargo is in Force

Under the statute declaring it a misdemeanor to knowingly offer, grant, solicit, or receive, rebates, etc., the mere offer by a carrier is held by the federal district court for the Southern District of New York to be an offense. But indictments charging that, while an embargo on transportation of hay was in force, a railroad did unlawfully offer and give permits for transportation to certain shippers, while others similarly situated did not receive certain permits, were held insufficient to charge the offense of discrimination, it not being alleged that there was any transportation. If there is no transportation, the mere giving of a permit is an idle act, although the case might be different if the railroad "offered" to transport. Transportation pursuant to authorization to one shipper, and denials to others similarly situated is a violation of the statute. Although the embargo was illegal, that does not make discriminatory transportation under it legal.—U. S. L. V., 254 Fed. 332. Decided January 29, 1919.

The federal district court for the District of New Jersey holds that, where defendant shippers by misrepresentations, etc., obtained transportation despite an embargo, prosecution could not be defeated because the embargo had not been submitted to the Interstate Commerce Commission and its reasonableness ascertained and adjudicated. The defendants were charged, not with having secured discriminations by means of the embargo, but in violation of it; therefore, the reasonableness of the embargo was not in question. Carriers by railroad have, of course, the power to lay embargoes for the proper conduct of their business.—U. S. v. Metropolitan Lumber Co., 254 Fed. 335. Decided November 30, 1918.

Equipment and Supplies

Equipment Requirements for Canadian Northern

Officers of the Canadian Northern estimate that \$35,000,000 will be spent for new equipment during 1919. Presumably this includes new locomotives, cars and track material.

British Railways Buying Ties in America

Sir James Bail, chief engineer of the London, Brighton & South Coast, who has been in charge of timber production in Great Britain during the war, is in the United States purchasing cross-ties for the British railways. He has placed orders for 2,000,000 redwood, Oregon fir and long leaf pine ties and has taken options on about 1,500,000 oak ties. The annual tie requirements of the British railways are about 5,000,000 ties.

Cars Built in Railroad Shops

New cars were constructed in railroad shops during the month of April as follows:

Freight—					
Stock	.....	7	...	7	
Hopper	.....	29	...	29	
Gondola	.....	1	...	1	
Flat	.....	4	...	12	16
Coke rack	.....	...	...	...	...
Work car	.....	2	3	7	12
Miscellaneous	.....	...	...	7	7
Freight cars	.....	...	...	...	...
Caboose	.....	19	23	3	50
Box	.....	10	5	150	319
Refrigerator	.....	...	...	...	...
Total freight equipment.....	31	35	160	215	441
Total passenger and freight...	31	35	160	215	441

No passenger-train cars reported.

Locomotive Deliveries

Locomotives were shipped to railroads under federal control during the week ended May 24, as follows.

Works	Road	Number	Type
American	L. & N.	6	USRA 8-w. Sw.
	Southern	1	USRA Mount.
	N. P.	4	USRA 8-w. Sw.
	A. C. L.	5	USRA Pacific
	C. B. & O.	10	USRA 8-w. Sw.
	P. L. W.	2	USRA 6-w. Sw.
	N. & W.	1	USRA Mount.
Baldwin	C. C. C. & St. L.	2	USRA Santa Fe
		31	
	Southern	2	USRA Mount.
	I. H. B.	2	USRA 8-w. Sw.
	B. & O.	4	USRA 6-w. Sw.
	T. & P.	2	Santa Fe
	C. B. & O.	1	Mikado
	C. C. & O.	1	Mallet
	A. T. & S. F.	3	Pacific
	P. & R.	1	Mallet
Total	A. T. & S. F.	2	Mount.
	S. P.	4	Santa Fe
	U. P.	1	Santa Fe
	Sou. Ry.	3	USRA Mount.
		26	
Total		57	

Locomotives

THE PENNSYLVANIA EQUIPMENT COMPANY, Philadelphia, Pa., is in the market for a locomotive of about 12 tons, and 40-in. gage.

THE KOREAN GOVERNMENT has ordered 12 Mikado type locomotives from the American Locomotive Company. These locomotives will have 25 in. by 28 in. cylinders, 160,000 lb. weight on drivers, and a total weight in working order of 206,000 lb.

THE PENNSYLVANIA EQUIPMENT COMPANY, 1420 Chestnut street, Philadelphia, Pa., is in the market for a second-hand Mogul type locomotive, weighing 60 tons, with wheel centers of 44 in., and 18, 19 or 20 in. by 24 in. cylinders, to be in first-class condition, for southern delivery.

Supply Trade News

Harold E. Wade has been appointed president of the Fairmont Gas Engine & Railway Motor Car Company, Fairmont, Minn., succeeding Frank E. Wade, deceased.

Edward Walters, sales engineer for the American Steel Foundries, Chicago, has resigned to enter the employ of the Keyoke Railway Equipment Company, Chicago, as salesman, with headquarters at Chicago.

E. C. Ryan, representative of the Electric Controller & Manufacturing Company with headquarters in New York, has been promoted to manager of the Chicago branch with office in the Monadnock building, Chicago.

W. L. Garland, who has been elected a vice-president of the Safety Car Heating & Lighting Company, with headquarters at Philadelphia, Pa., as was briefly noted in our issue



W. L. Garland

of May 30, was born in Blair county, Pennsylvania. He completed his apprenticeship at the Altoona shops of the Pennsylvania Railroad in 1892; he then served in various departments of the shops for five years, and later took up locomotive and car design. In 1901 he was appointed chief car inspector on the Pennsylvania Railroad. In 1907 he was appointed general agent of the Safety Car Heating & Lighting Company, and in 1909, was promoted to manager. Mr. Garland was commissioned a major in the Corps of

Engineers and was assigned to the 87th Battalion, Military Railroads. He was released from active service on the signing of the armistice.

The Duntley-Dayton Company, Chicago, has taken over the sales agency for the Red Devil rivet cutting guns, made by the Rice Manufacturing Company, Indianapolis, Ind., for all territory east of the Rocky mountains.

The Bordon Company, Warren, Ohio, manufacturers of the Beaver die stocks and die cutters, has opened a downtown Chicago office at 549 West Washington street, in charge of Charles A. Green, Chicago representative.

Lieut. E. D. Stearns, who served in the aviation corps of the United States Army, has been appointed sales manager of the H. K. Ferguson Company, Cleveland, Ohio. Before entering military service, Lieut. Stearns was a partner of the Fort Pitt Engineering Company, Pittsburgh.

The Pollak Steel Company, Cincinnati, Ohio, has appointed D. E. Sawyer general manager of sales, with headquarters at 120 Broadway, New York, effective July 1. Mr. Sawyer was formerly connected with the Illinois Steel Company, and assistant steel director of purchases of the War Industries Board.

The Stark Rolling Mill Company, Canton, O., has appointed George W. Scott district manager for the Chicago territory, with headquarters at 1119 Marquette building. Mr. Scott was formerly Chicago representative of the Pittsburgh Steel Company. Thomas F. Murphy has been appointed district manager for the Canton territory. He was formerly connected with the American Sheet & Tin Plate Company.

Jno. T. Mahoney, purchasing agent of the Buda Company, Chicago, with headquarters at Harvey, Ill., has been promoted to sales manager of the truck and tractor engine department, to succeed Lon R. Smith, who has resigned to become general sales manager of the Midwest Engine Company, Indianapolis, Ind.

The International Oxygen Company, Newark, N. J., has appointed Preston Belvin district sales engineer, in charge of the Pittsburgh district sales work, with office at 1310 First National Bank building, Pittsburgh, Pa. The Chicago office, in charge of Philip G. Wesley, has been removed from 223 Railway Exchange building to 817-820 Chicago Stock Exchange building, 30 North La Salle street.

The Haywood Company (T. G. Haywood and M. L. Bugbee) has opened offices in the Alaska Commercial building, San Francisco, Cal. The company will do an importing and exporting business, particularly in steel products, machinery, contractors' and railroad equipment and engineering specialties. Mr. Haywood was formerly manager of the Pacific Car & Foundry Company, with headquarters at Portland, Ore.

Major J. L. Terry, formerly of the St. Louis office of the Q and C Company, New York, and now with the American Expeditionary Forces, Transportation Service, with headquarters at Rennes division, France, expects to return home in the near future. Lieut. L. T. Burwell and E. C. Zimmerman, both of the New York office, are out of military service and back in their old positions traveling out of New York and Lieut. C. M. Brennan is also out of the service and is again located with the Chicago office.

Vernon T. Brauns, whose promotion to general manager of all departments of the American Blue Print Paper Company, Chicago, was announced in the *Railway Age* of May 23

(page 1286), was born at Port Chester, N. Y., on August 22, 1879. At the age of 19 years he entered the employment of Whitston & Little, Chicago, as a salesman, dealing especially with specialty sales work. In February, 1915, he entered the employ of the American Blue Print Paper Company as a sales representative, and while in the services of that firm he promoted with success the newer photostat and ambucolitho processes. In the summer of 1918 he entered the government service at Camp Custer, Battle

Creek, Michigan, as chief clerk in the supervising engineer's office of the Camp Custer extension, in which capacity he served until January, 1919, when he again re-entered the employment of the American Blue Print Paper Company as manager of the railroad valuation department, which position he held until his recent promotion as general manager of all departments on May 8.

R. P. Lamont, president of the American Steel Foundries, Chicago, has authorized the announcement that the contract for the purchase of the Griffin Wheel Company has been signed. Negotiations for the taking over of the latter property by the American Steel Foundries have been under way for some time and many reports of the completion of these negotiations have been circulated, all of which have been unfounded. According to Mr. Lamont no further information is available at this time as to the details of the purchase but a statement will be issued in the near future.



V. T. Brauns

The Buffalo Forge Company, Buffalo, N. Y., announces that Lieut. C. C. Cheyney has returned from service in the United States Navy, and is now in charge of its Chicago office and store. Lieut. Cheyney had charge of the mechanical repair shops at the naval aviation station, Pensacola, Fla., where from 500 to 1,200 men were employed during the war. Captain H. H. Downes, 12th U. S. Engineers (Railway), has returned from France, and after receiving his discharge expects to take charge of the Buffalo Forge Company's interests in the St. Louis territory. Captain Downes' regiment was one of the first to go to France, sailing in July, 1917.

E. L. Ryerson, Jr., has received his honorable discharge from the army and has returned to the Joseph T. Ryerson & Son Company, Chicago, as vice-president and works manager after nearly two years of absence. Mr. Ryerson left early in 1917 to handle production engineering work, as a civilian, with the Aircraft Production Board at Washington, D. C. He was later commissioned first lieutenant in the Signal Corps, U. S. Army, Aviation Section, and was subsequently promoted to captain at which time he was transferred to the Division of Military Aeronautics as engineer officer and assigned to March Field, Riverside, Cal., at which place he qualified as a pilot, receiving the rating of reserve military aviator.

Stanley J. Quinn, secretary of the American Manufacturers' Export Association, has resigned to accept a position with one of the members of the association, effective May 31. He has been succeeded by Robert F. Volentine, who for the last several months has been associated with the Brooklyn Chamber of Commerce. The newly elected secretary, in addition to his activities in connection with the Brooklyn Chamber of Commerce, served during the war as district director of the Northeastern Division of the War Department's Commission on Training Camp Activities. In 1917 he was named by Mayor Mitchel as president of the Park Board, City of New York. Prior to that he served as secretary of the Department of Parks and as a member of the staff of the New York Bureau of Municipal Research.

Jay L. Hench, assistant district sales manager of the Lackawanna Steel Company, at Chicago, has been promoted to district sales manager, with headquarters at the same point. Mr. Hench was born at Hinsdale, Ill., on April 11, 1885, and after graduation from the high school of that place entered Cornell University in 1903, in which institution he specialized in iron and steel metallurgy. He began his business career in the fall of 1905, at which time he entered the employ of the Illinois Steel Company in its south works at South Chicago, Ill., where he was engaged for one year in practical work in the open-hearth and Bessemer departments of that plant. The following five years he was in the employ of Joseph T. Ryerson & Son, Chicago, most of which time he was acting in the capacity of sales representative in Indiana and Michigan, with headquarters at Chicago. He resigned from that position in 1911 to enter the service of the Lackawanna Steel Company, with which company he was assistant district sales manager, with headquarters at Chicago, prior to his recent promotion.

Victor E. Karminski & Company, New York, has been incorporated to engage in export merchandising of iron and steel products, with the followings officers: Victor E. Karminski, president; H. L. Landau, first vice-president in charge of sales; J. H. Allen, vice-president in charge of purchases; Alexander Karminski, treasurer, and M. Frank, secretary.



J. L. Hench

The offices of the company are at 291 Broadway. Victor E. Karminski was one of the founders of the W. J. Crouch Company, which later merged with Rownson, Drew & Clydesdale, Inc. Mr. Karminski became secretary and joint general manager of the combined companies, from which position he recently resigned. Mr. Landau served as expert sales manager of the Buffalo Specialty Company and then for the Baker-Vawter Company. He later became connected with the Vulcan Steel Export Company which he left to become associated with Mr. Karminski in the W. J. Crouch Company, and after the merger he acted as assistant and general sales manager for Rownson, Drew & Clydesdale. Mr. Allen has had 19 years' experience in the steel business. He organized the Manhattan Rail Joint Company which was later sold to the Elyria Iron & Steel Company. He also served the Vulcan Steel Products Company and then became purchasing agent for the W. J. Crouch Company, later becoming vice-president and general purchasing agent for Rownson, Drew & Clydesdale. Alexander Karminski, treasurer, was for 12 years connected with the banking house of Asiel & Company.

Trade Publications

IRON CEMENT.—The Smooth-On Manufacturing Company, Jersey City, N. J., has issued a revised edition of Smooth-On Instruction Book No. 16. This edition, like its predecessors, is made up of descriptions of engine and boiler room repairs of all kinds. These are described by the men who made them in such a way that similar problems can be quickly solved by others. The book is well illustrated by actual photographs and drawings. Among the subjects covered are engine repairs, pump repairs, boiler and tank repairs, valve repairs, wheel pit and engine bed construction, etc.

ELECTRIC HEADLIGHTS.—The second edition of an instruction book covering the installation, care and operation of Sunbeam turbo-generators and headlights has been published by the Schroeder Headlight & Generator Company, Evansville, Ind. The information given in this book is quite extensive and not only deals with the Sunbeam turbo-generators and headlights, but contains considerable information pertaining to incandescent headlights in general, as well as many useful tables and formulae. It also contains many drawings and photographs showing detail parts and wiring arrangements.

ELECTRIC FURNACES.—Booklet 5-B, published by the Electric Furnace Company, Alliance, Ohio, is an attractive 24-page catalogue describing the Baily types of electric furnaces for melting non-ferrous metals. These types embrace pusher type continuous furnaces for heating and annealing steel, copper, brass and aluminum, automatic control type continuous furnaces for heat treating steel castings and forgings, and car type furnaces for annealing steel, copper, brass and aluminum, and have electrical capacities of from 150 kw. to 1,500 kw., and furnace capacities of 1,000 lb. to 10 tons per hour. These furnaces are all of the resistance type and have several distinct features. The booklet contains illustrations of a number of actual installations and records of tests made with the equipment in several industrial plants.

STOKER FIRED LOCOMOTIVES.—The Locomotive Stoker Company, Pittsburgh, Pa., has published an attractive booklet of 96 pages, bound in heavy cardboard covers, illustrating some of the principal types of locomotives that have been equipped with mechanical stokers by the Locomotive Stoker Company, which include the largest and most powerful locomotives constructed, as well as the standard locomotives of the United States Railroad Administration. The various types of locomotives considered to be in the stoker class are grouped in sections, each page containing an illustration of a representative locomotive of different railroads, with a table of the principal dimensions. After each section is a tabulation which permits of a direct comparison of the like dimensions of all locomotives of that class. These tables should be of special interest to mechanical engineers designing new locomotives, as well as to those contemplating installing stokers on old locomotives.

Railway Financial News

BROOKLYN RAPID TRANSIT.—Receiver Lindley M. Garrison has been authorized by the Federal District Court of New York to issue \$20,000,000 of receiver's certificates.

CENTRAL OF GEORGIA.—This company has sold to Kuhn, Loeb & Co. \$8,000,000 ten-year, 6 per cent collateral trust bonds. They were offered to investors at 99, or at 6½ per cent basis.

In a letter to the company's bankers, President Lawton, of the Central of Georgia, calls attention to the fact that the company has paid continuously since July 1, 1912, 6 per cent dividends on its \$15,000,000 preferred stock and 5 per cent upon the \$5,000,000 common stock. All the stock of both classes, except directors' qualifying shares, is owned by the Illinois Central. Proceeds of the \$8,000,000 bonds just sold are to be used to pay off temporary loans made for capital purposes and to pay for such expenditures to be made. Except for a small issue of equipment certificates in 1916, this is the first bond issue of the road since 1907. The bonds are to be secured by deposit of \$11,000,000 par value 6 per cent refunding and general mortgage bonds, series A. This is a new mortgage to be created, authorizing bonds limited to three times the capital stock, including bonds reserved for refunding of existing issues, and maturing April 1, 1959.

CLEVELAND, CINCINNATI, CHICAGO & ST. LOUIS.—See editorial elsewhere in this issue.

DENVER & RIO GRANDE.—The Equitable Trust Company of New York has issued the following notice: "The receiver of the Denver & Rio Grande finds himself unable to pay the interest on the 5 per cent improvement bond mortgage due June 1. The necessary appropriation bill not yet having passed Congress, the government has failed to pay to the receiver sufficient of the actual earnings of the road and the court is disinclined to permit the receiver to borrow on warrants showing earnings. It is expected, however, that within the sixty-day period of grace allowed by the mortgage the necessary appropriation will have been passed and the receiver thus placed in funds to take up the June 1 coupons. Meanwhile these coupons will be purchased from holders desiring to sell the same by the Equitable Trust Company on account of the Western Pacific Railroad Corporation on presentation at the office of the trust company."

LEHIGH VALLEY.—The directors on Wednesday declared the regular quarterly dividend of 2½ per cent on the preferred stock, but the common dividend was cut from 2½ per cent to 1¾ per cent. These two disbursements will be made July 5 to stockholders on record June 14 provided the company receives payment from the United States Government, now due.

In connection with the dividend cut, President E. E. Loomis said: "This action has been taken because we believe it is the conservative thing to do at this time. Paying 10 per cent dividends under existing conditions leaves too small a margin of safety for careful management. If the future earnings of the Lehigh Valley Railroad and its controlled properties should justify it, the board will give careful consideration to an increased distribution to stockholders."

MICHIGAN CENTRAL.—See editorial elsewhere in this issue.

NEW YORK CENTRAL.—See editorial elsewhere in this issue.

READING COMPANY.—Alfred H. Smith has been elected a director to succeed William K. Vanderbilt, Jr.

The week beginning June 22 and ending June 28, has been designated as "no accident" week on all railroads in the Northwestern region. The campaign will be conducted by the Safety Section and detailed instructions are to be issued to all safety supervisors on each road in an effort to maintain a 100 per cent safety record during this week.

Railway Officers

Railroad Administration

Federal and General Managers

R. N. Hudson, general superintendent of the Louisville, Henderson & St. Louis, with headquarters at Louisville, Ky., has been appointed general manager, and the office of general superintendent has been abolished.

Operating

D. R. MacBain, superintendent of motive power of the New York Central, Lines West of Buffalo, has been appointed assistant general manager of the Lines West, with headquarters at Cleveland, Ohio.

F. G. Hoskins has been appointed superintendent of the Baltimore Terminal division of the Baltimore & Ohio Eastern Lines, and the Western Maryland, with headquarters at Baltimore, Md., vice **R. A. Grammes**, resigned.

B. F. Van Vliet, division superintendent of the Chicago, Milwaukee & St. Paul, with headquarters at Milwaukee, Wis., has been appointed superintendent of the Des Moines division with headquarters at Des Moines, Iowa, vice **E. W. Lollis**, transferred.

C. L. Fike, acting assistant superintendent of the Eastern division of the Western Pacific with headquarters at Elko, Nev., has been promoted to assistant superintendent of the Eastern division with jurisdiction over the Deep Creek Railroad. Mr. Fike will retain the same headquarters.

Ralph Peters, Jr., who was granted a furlough for service with the Railway Transportation Corps of the American Expeditionary Force in France, has returned and will resume his position as assistant superintendent of the Long Island Railroad. **E. B. Kessler**, assistant superintendent at Jamaica, N. Y., will resume his former position as freight trainmaster, and **John Roe**, acting freight trainmaster, has been granted indefinite leave of absence on account of sickness.

Financial, Legal and Accounting

G. A. Leber has been appointed auditor of the Trans-Mississippi Terminal Railroad, with headquarters at New Orleans, La.

Traffic

G. S. Trowbridge has been appointed assistant general freight agent of the St. Louis-Southwestern, with headquarters at St. Louis, Mo., succeeding **J. E. Allen**, who has resigned to engage in other business.

Walter S. Williams, traveling freight agent of the Chicago, Rock Island & Pacific with headquarters at Des Moines, Iowa, has been promoted to division freight agent with the same headquarters succeeding **George W. Williams** who has resigned to engage in other business.

J. S. Henney has been appointed assistant general freight agent of the Toledo, St. Louis & Western, with headquarters at St. Louis, Mo., vice **B. H. Coyle**, division freight agent, resigned, and **R. L. Dore**, assistant general freight agent, has been appointed division freight agent with headquarters at Frankfort, Ind.

Engineering and Rolling Stock

George T. Anderson, roadmaster on the Kansas City Southern, with headquarters at Spiro, Okla., has been promoted to general roadmaster of the Midland Valley, with jurisdiction over the road, bridge and building, and engineering departments, with headquarters at Muskogee, Okla., succeeding **Charles Kaighn**, who has been promoted to valu-

ation engineer of the Midland Valley with headquarters at Muskogee. The jurisdiction of **V. V. Kirkpatrick**, valuation engineer of the Missouri & North Arkansas and the Midland Valley has been withdrawn from the latter road.

E. G. Lane, chief engineer of the Baltimore & Ohio, Western Lines, and the Dayton & Union, with headquarters at Cincinnati, Ohio, has had his jurisdiction extended over the maintenance of way department of these roads.

Joseph Chidley, assistant superintendent of motive power on the New York Central, Lines West of Buffalo, at Cleveland, Ohio, has been appointed superintendent of motive power of the Lines West, vice **D. R. MacBain**, promoted.

Purchasing

C. R. Couchman, tie and timber agent on the Pere Marquette, has been appointed assistant purchasing agent and general storekeeper, vice **N. C. Foss**, who has entered the service of the Grand Trunk Western Lines, and **W. W. Bracy**, stationer, has been appointed tie and timber agent vice Mr. Couchman, both with headquarters at Detroit, Mich.

Special

W. J. Flynn has resigned as chief of Secret Service and Police Section, Railroad Administration, to become chief of Bureau of Investigation, Department of Justice.

Corporate

Executive, Financial, Legal and Accounting

E. W. Meyer has been appointed assistant to the receiver of the Denver & Salt Lake, with headquarters at Denver, Colo.

William Sharpe, formerly statistician in the president's office of the Chicago & Alton and later in charge of the insurance department at Chicago, has been appointed auditor with the same headquarters.

Traffic

H. C. Martin, general freight agent of the Grand Trunk, with headquarters at Montreal, Que., has been promoted to freight traffic manager, vice **C. E. Dewey**, deceased. Mr. Martin entered the service of the Grand Trunk in 1888, and served in the local freight office in Chicago. He subsequently was consecutively agent of the Lackawanna and Grand Trunk fast freight line, chief of the tariff bureau, and assistant general freight agent, all on the western lines of the Grand Trunk. In 1911 he was appointed general freight agent of the Grand Trunk System, with headquarters at Montreal, and on June 1 was promoted to freight traffic manager with jurisdiction over the lines east of the Detroit and St. Clair rivers.



H. C. Martin

Lorne Macdonald, division freight agent on the Grand Trunk, with office at Toronto, Ont., has been promoted to assistant general freight agent, with office at Montreal, Que., vice **F. J. Watson**, promoted. Mr. Macdonald entered the service of the Grand Trunk in 1887, as apprentice clerk at Montreal. Two years later he was appointed secretary to the general traffic manager and in 1901 became secretary to the freight traffic manager. In 1903, he was appointed di-

vision freight agent at Hamilton, and in 1907 was transferred to Toronto, which position he held until his promotion on June 1, to assistant general freight agent in charge of the lines east of the Detroit and St. Clair rivers.

Frank J. Watson, assistant general freight agent on the Grand Trunk, with office at Montreal, Que., has been promoted to general freight agent vice **H. C. Martin**, promoted, effective June 1. Mr. Watson entered the service of the Grand Trunk in 1884, in the freight traffic office, at Toronto, Ont. In 1892, he was appointed traveling freight agent, with office at Montreal, and four years later became chief clerk to the district freight agent at Hamilton. The following year he was transferred to Stratford. He later served as district freight agent at Montreal, and in 1911 was appointed assistant general freight agent on the Grand Trunk System, from which position he is now promoted to general freight agent, with jurisdiction over the lines east of the Detroit and St. Clair rivers.



F. J. Watson

Purchasing

Horacio V. Garza has been appointed assistant purchasing agent of the National Railways of Mexico, with office at New York, vice **F. P. de Hoyos**, who was local purchasing agent. Mr. de Hoyos remains as general agent of the National Railways of Mexico as well as purchasing and general agent of the Southeastern Lines of Mexico.

Obituary

E. Hampton Coombs, formerly general eastern passenger and freight agent of the St. Louis-Southwestern, with headquarters at New York City, died at Bowling Green, Ky., on May 23, at the age of 50 years.

George W. Hulsizer, superintendent of telegraph and signal engineer of the Chicago & Alton, the Chicago, Peoria & St. Louis, the Peoria & Pekin Union and the Peoria Railroad Terminal with headquarters at Bloomington, Ill., died in that city on May 30 of heart failure, following an attack of acute indigestion. Mr. Hulsizer was born at Clinton, N. J., on September 1, 1872. He began railway work in 1893 in the engineering department of the Lehigh Valley. Shortly afterward he learned telegraphy and entered the employ of the Chicago & Alton with which company he remained until 1900 in the capacity of telegraph operator and agent. He returned to the Lehigh Valley in 1900 and after a few months on construction work he was assigned to the maintenance staff. In October, 1901, he became assistant foreman of signal construction in which position he remained until the following summer when he entered the service of the signal department of the Chicago & North Western as a repairman on pneumatic work with headquarters at Chicago. Two and a half years later he was appointed signal supervisor of the Iowa division with headquarters at Boone, Iowa. In September, 1907, he resigned to enter the employ of the Southern as assistant to the electrical and signal engineer at Washington, D. C. On November 1, 1909, he was appointed signal engineer of the Chicago & Alton with headquarters at Bloomington, Ill., and on April 1, 1914, when the signal and telegraph departments were consolidated he was appointed superintendent of telegraph and signal engineer. In July, 1918, his jurisdiction as superintendent of telegraph and signal engineer was extended to include the Chicago, Peoria & St. Louis, the Peoria & Pekin Union and the Peoria Railroad Terminal.